

Intact Double Stranded DNA**Mechanical Fragmentation****Randomly Fragmented Duplex DNA****Polish Ends****Adaptor****Ligation****Extension**

FIG. 1

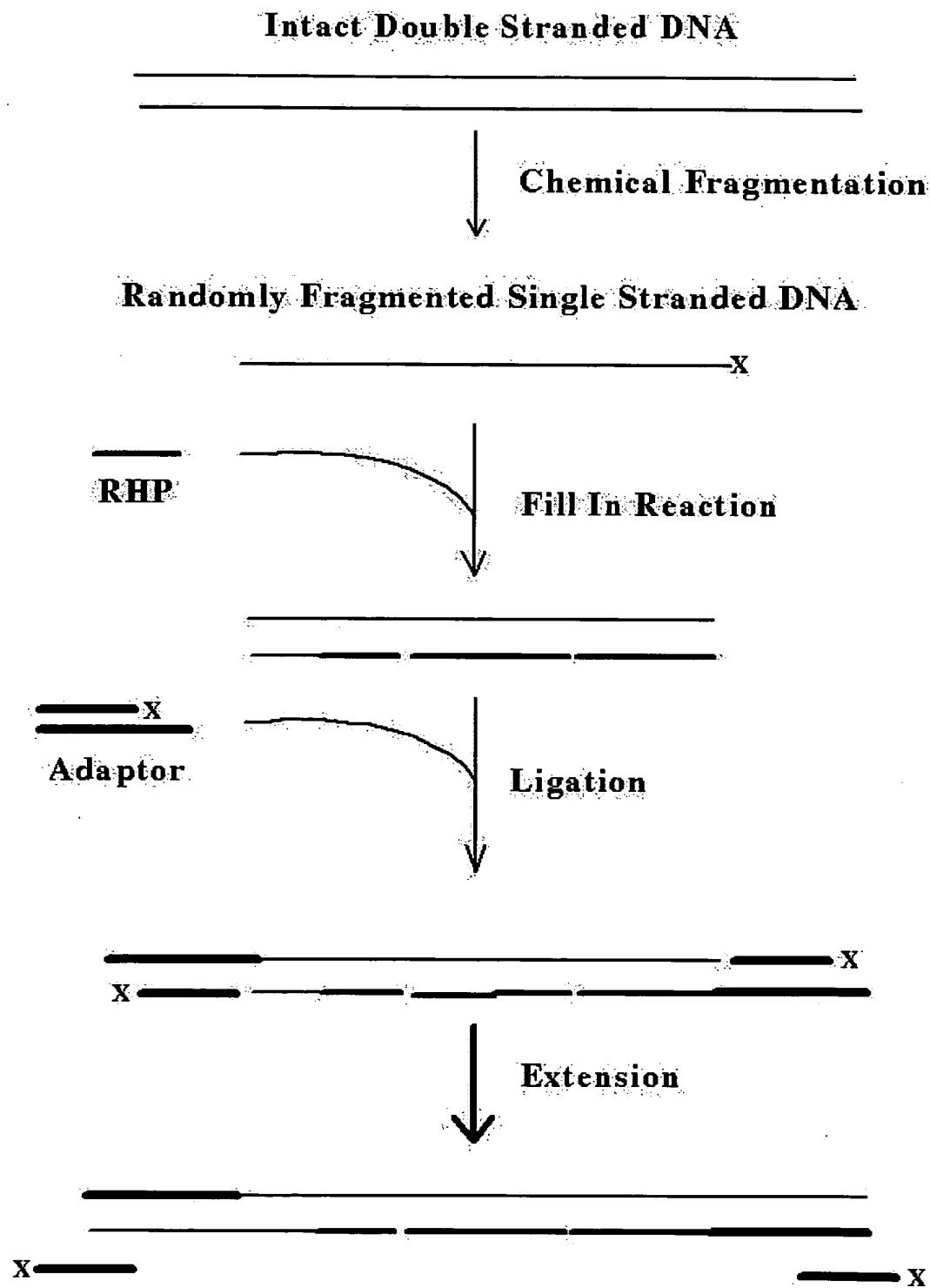


FIG. 2

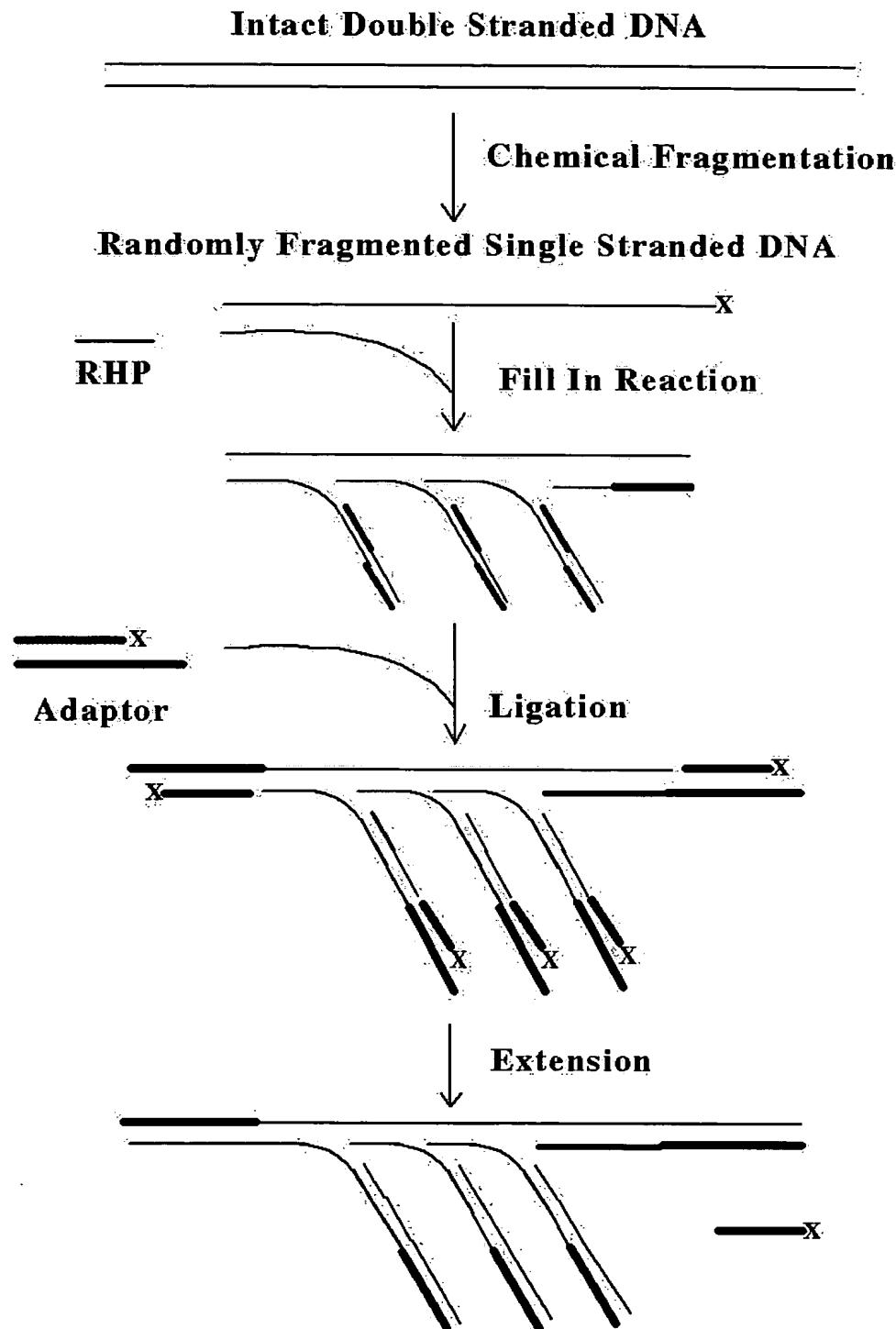


FIG. 3

Double Stranded DNA**Chemical Fragmentation****Randomly Fragmented Single Stranded DNA****RHP****Fill In Reaction****Nick Translation****Adaptor****Ligation****Extension****FIG. 4**

A

Blunt End Adaptor

5' GTAATACGACTCACTATAAGG-3' (SEQ ID NO:32)
3'-X TGACGTGATATCC-5' (SEQ ID NO:33)

3' Overhang Adaptor

5' GTAATACGACTCACTATAAGGN-3' (SEQ ID NO:34)
3'-X TGACGTGATATCC-5' (SEQ ID NO:33)

5' Overhang Adaptor

5' GTAATACGACTCACTATAAGG-3' (SEQ ID NO:32)
3'-X TGACGTGATATCCN-5' (SEQ ID NO:35)

B

Linear T7HEG Adaptor

5'-CCTATAGTGAGTCGTATTACTTT HEG **TTTGTAATACGACTCACTATAAGG-3'** (SEQ ID NO:36)

Annealed T7HEG Adaptor

HEG **TTTGTAATACGACTCACTATAAGG-3'**
TTT CATTATGCTGAGTGATATCC-5' (SEQ ID NO:36)

FIG. 5

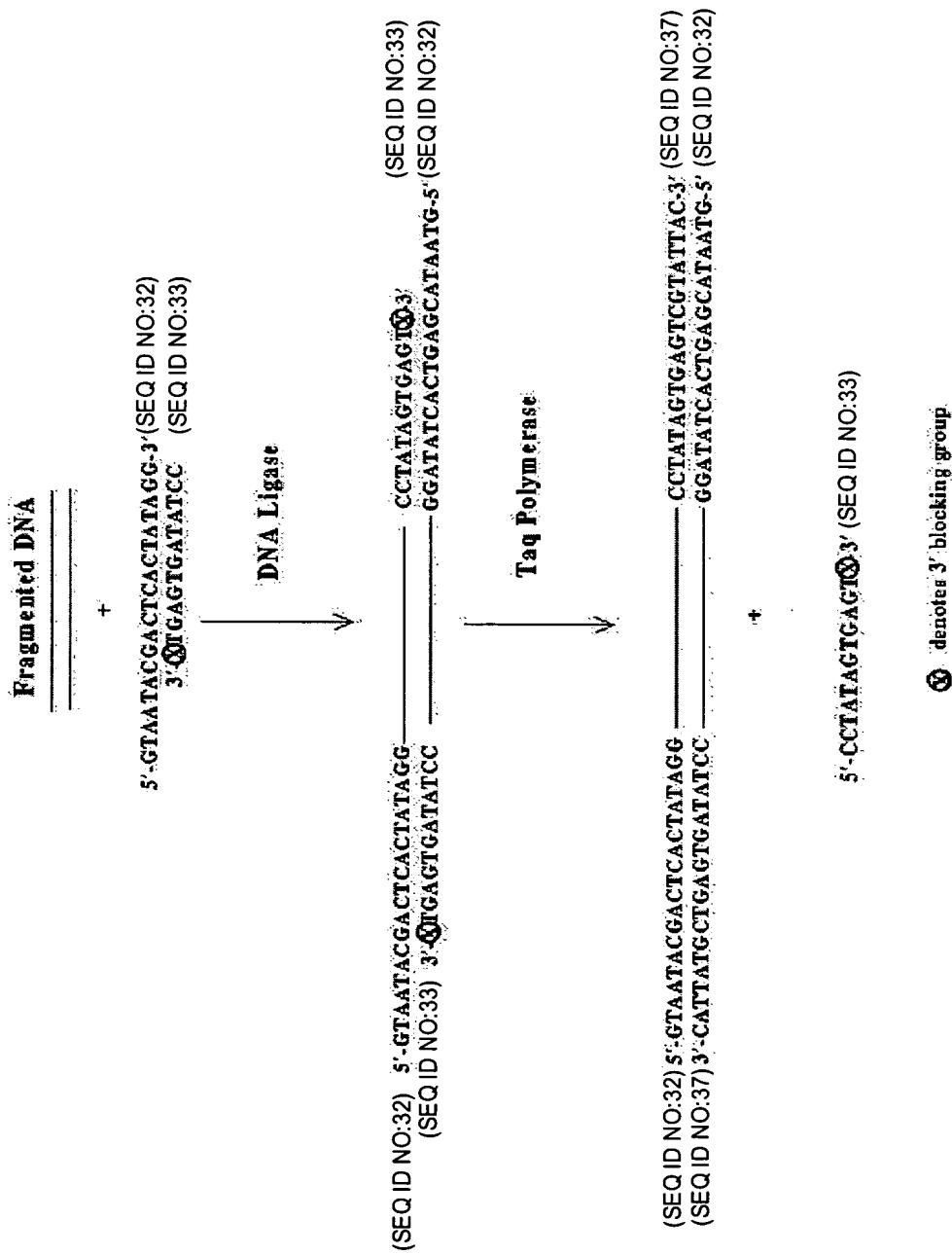
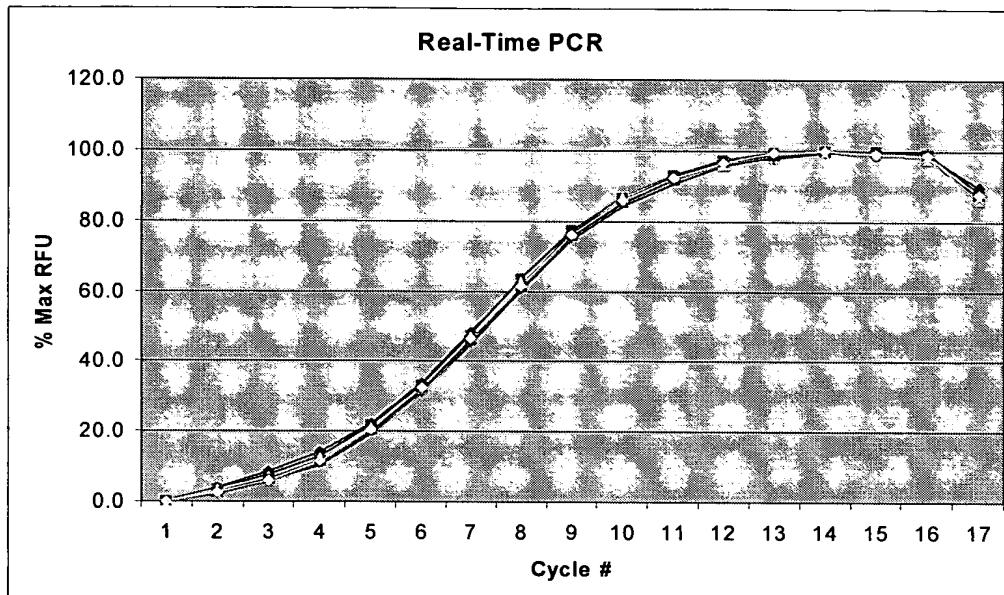


FIG. 6

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A



B

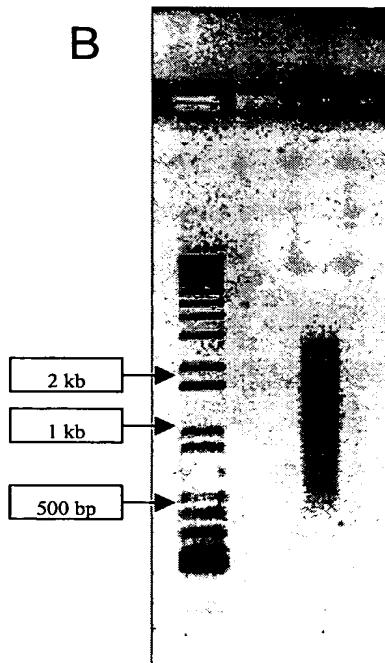
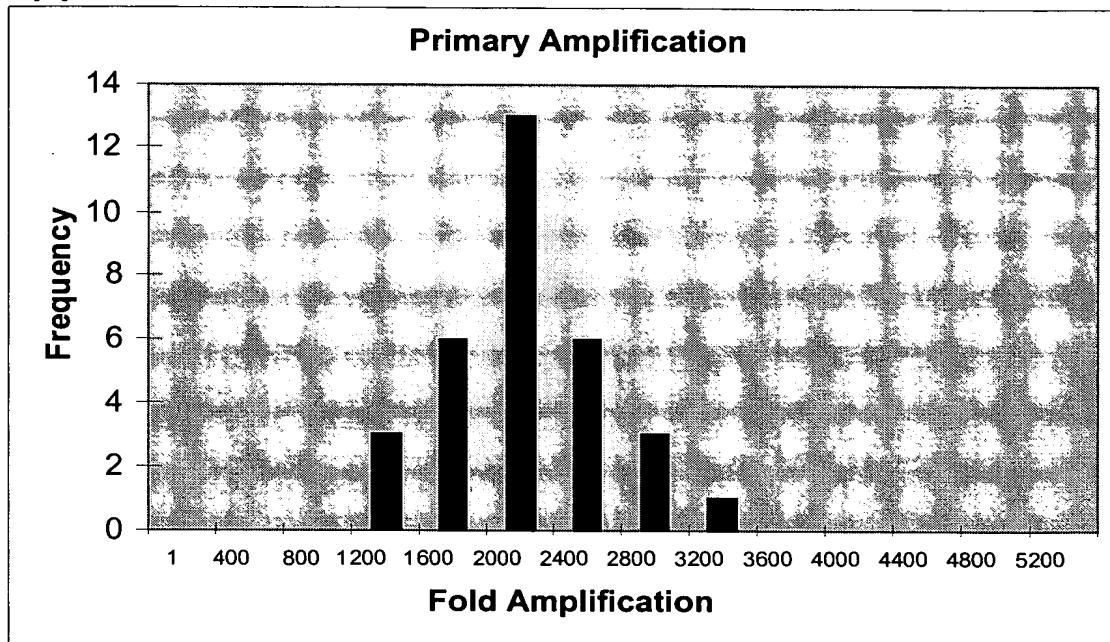
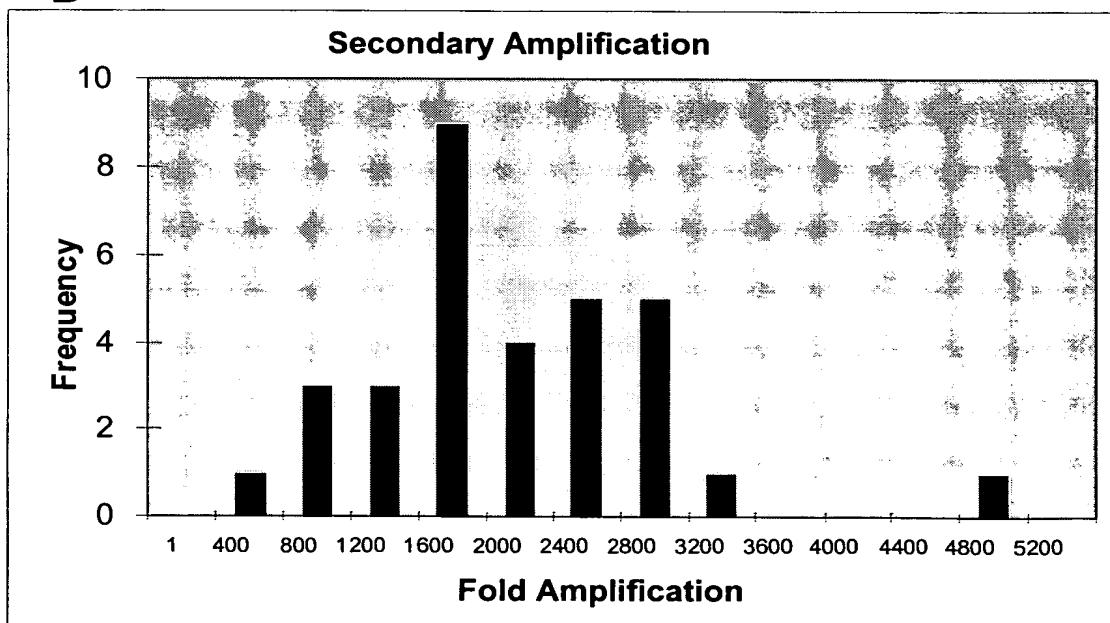


FIG. 7

A**B****FIG. 8**

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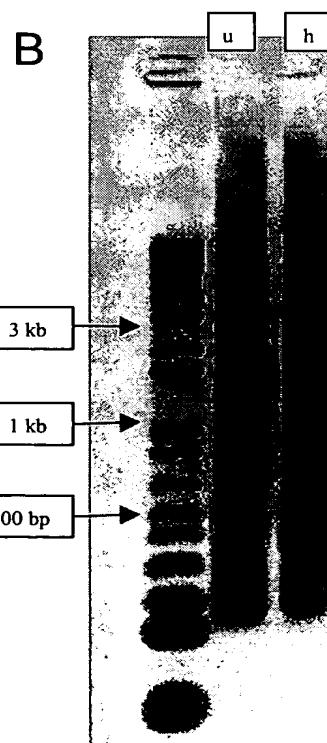
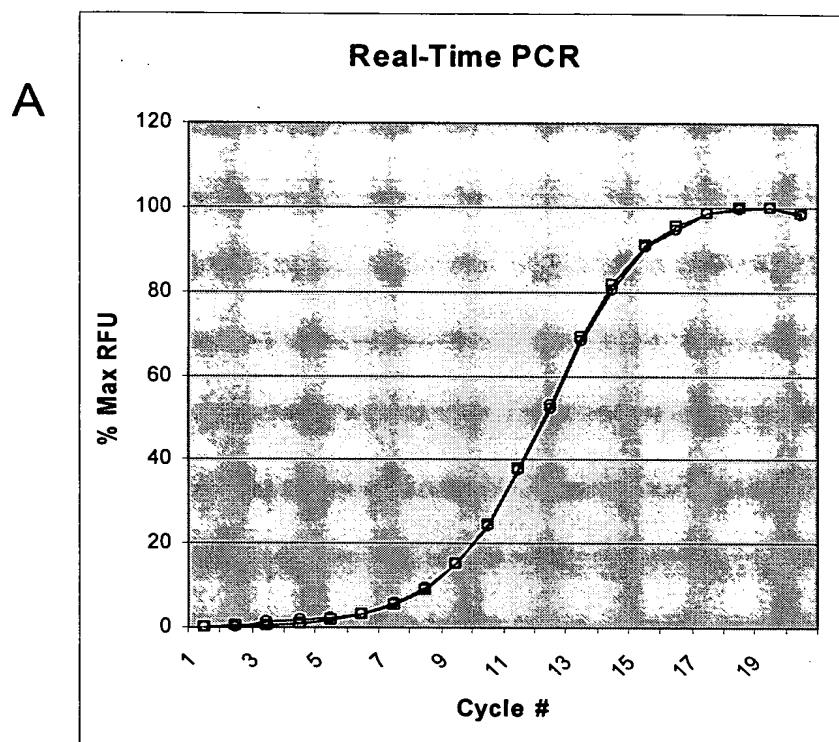


FIG. 9

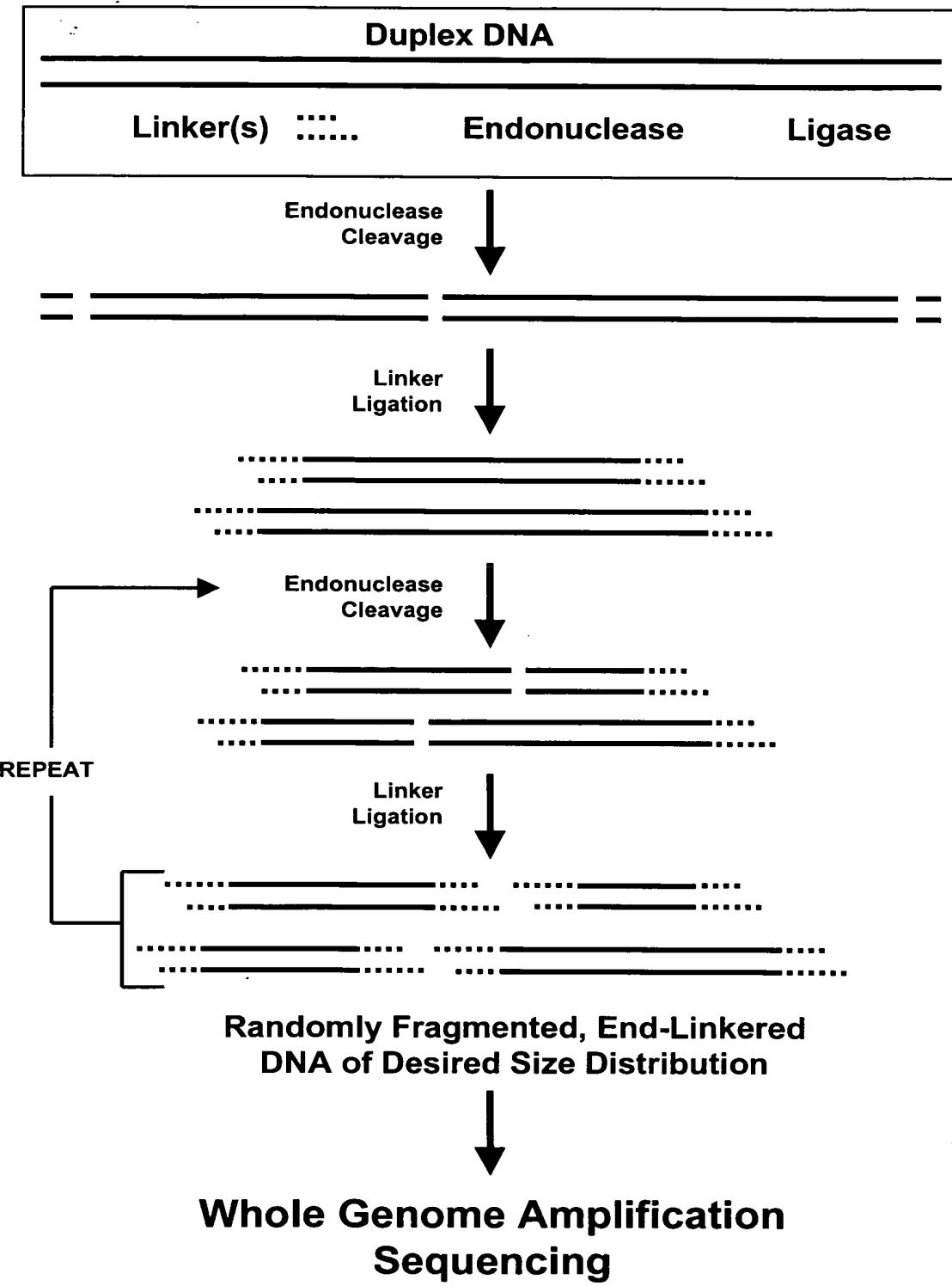


FIG. 10

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11A

5' 3'
3' 5'

11B

5' N..... 3'
3' 5'

11C

5' 3'
3' N..... 5'

FIG. 11

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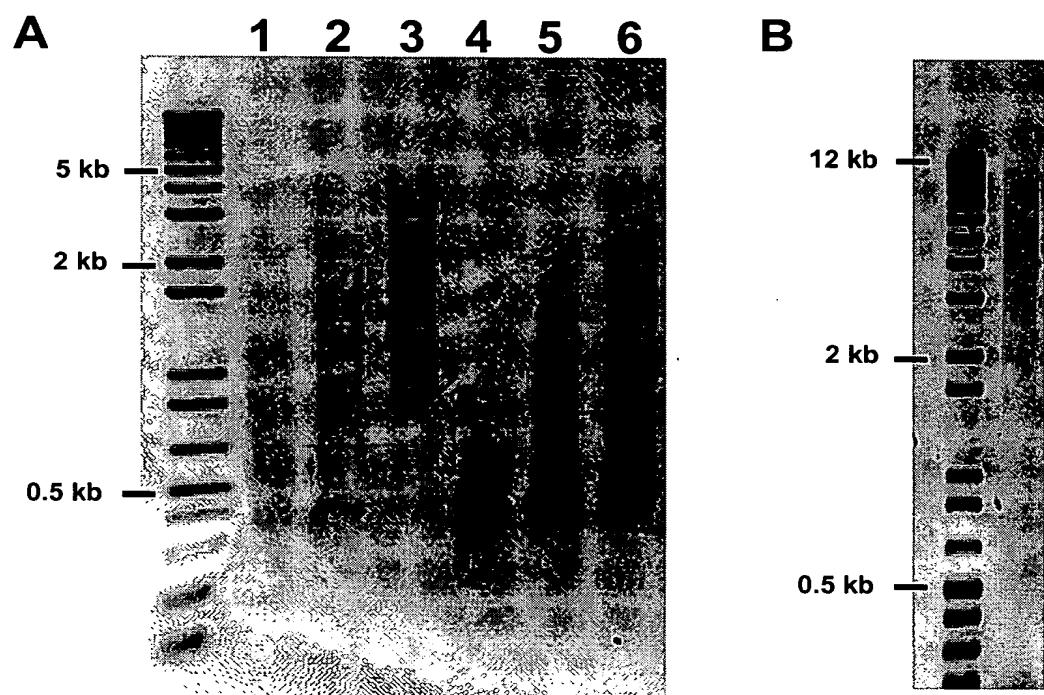


FIG. 12

A 5' -**CCTATAGTGAGTX-3'** (SEQ ID NO:33)
3' -**GGATATCACTCAGCATAATGA-5'** (SEQ ID NO:38)

B 5' -**NCCTATAGTGAGTX-3'** (SEQ ID NO:39)
3' -**GGATATCACTCAGCATAATGA-5'** (SEQ ID NO:38)

C 5' -**NNCCTATAGTGAGTX-3'** (SEQ ID NO:39)
3' -**GGATATCACTCAGCATAATGA-5'** (SEQ ID NO:38)

D 5' -**CCTATAGTGAGTX-3'** (SEQ ID NO:33)
3' -**NNGGATATCACTCAGCATAATGA-5'** (SEQ ID NO:40)

E 5' -**CCTATAGTGAGTX-3'** (SEQ ID NO:33)
3' -**NGGATATCACTCAGCATAATGA-5'** (SEQ ID NO:41)

FIG. 13

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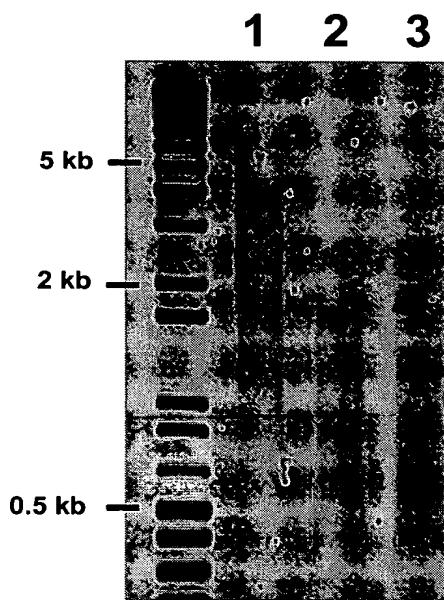
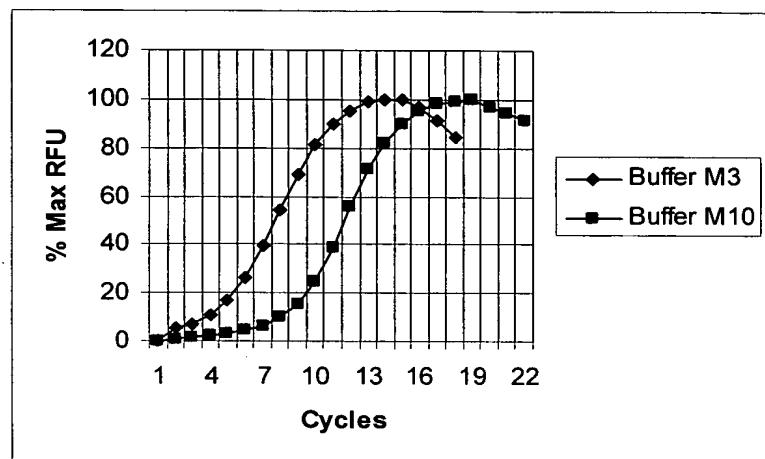
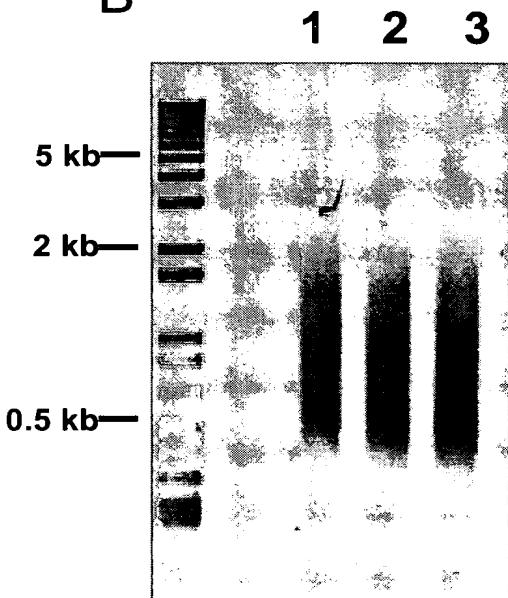
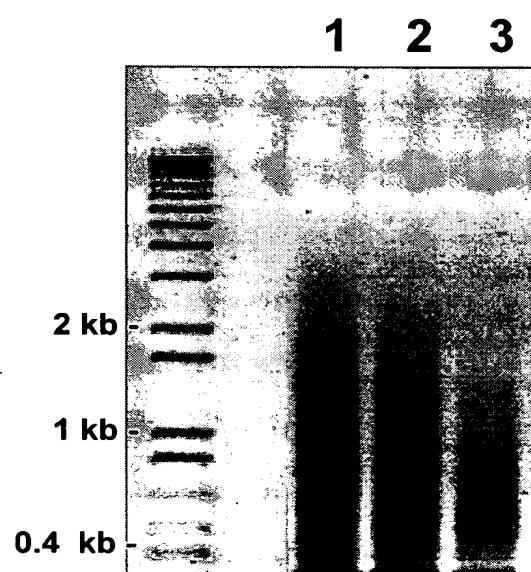
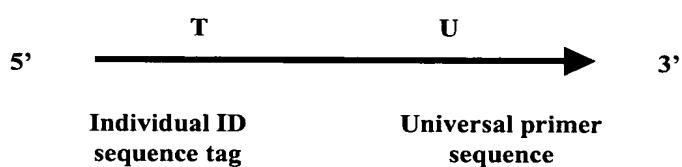


FIG. 14

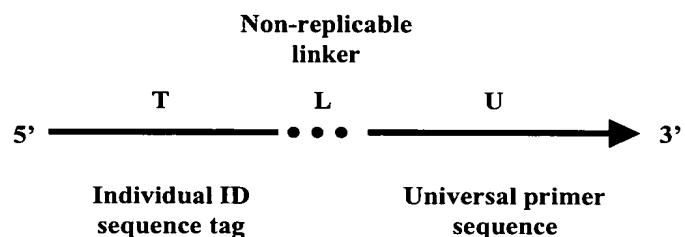
A**B****C****FIG. 15**

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A



B



C

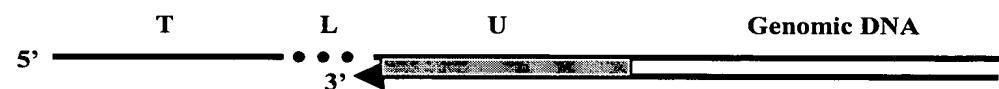


FIG. 16

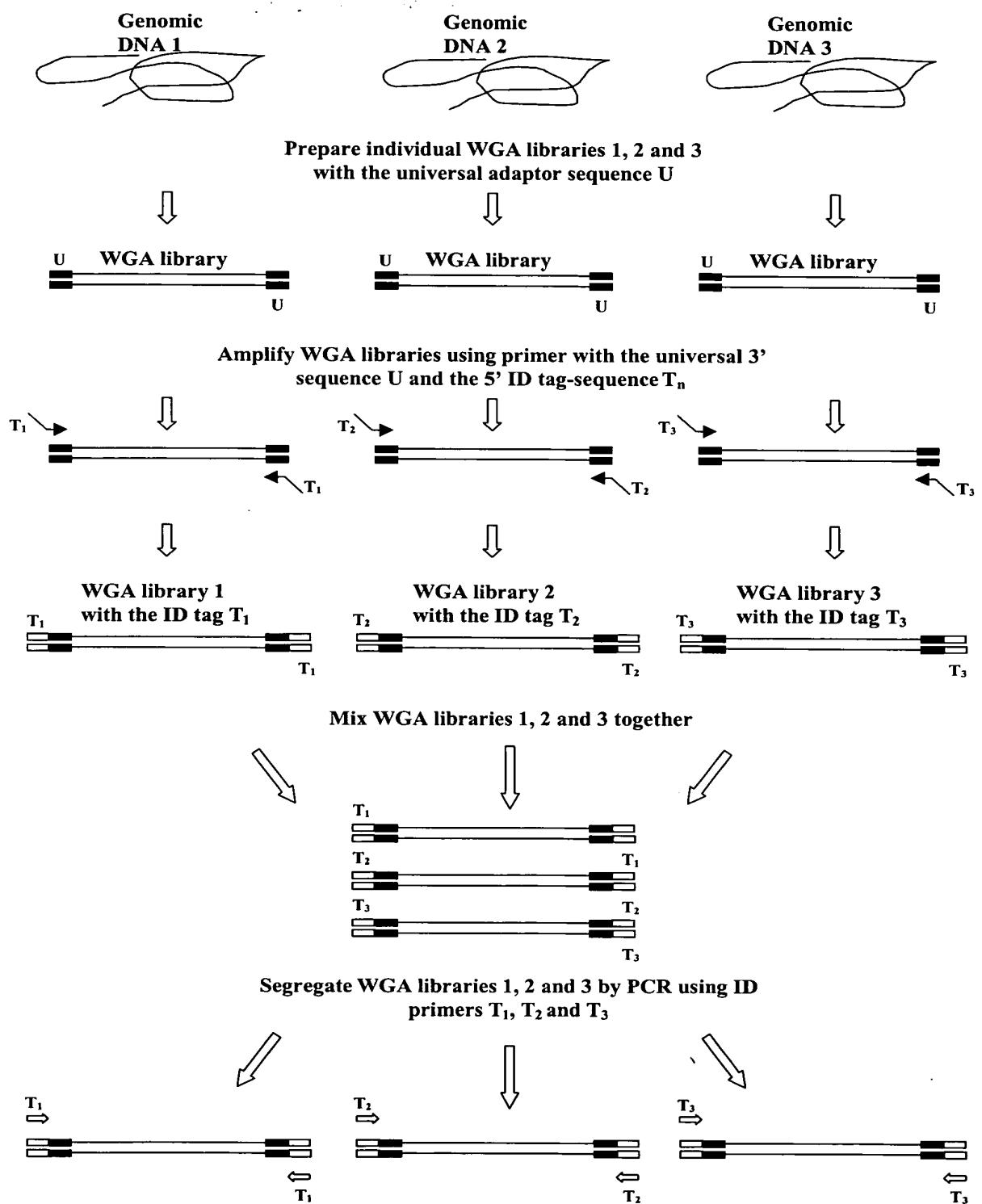


FIG. 17

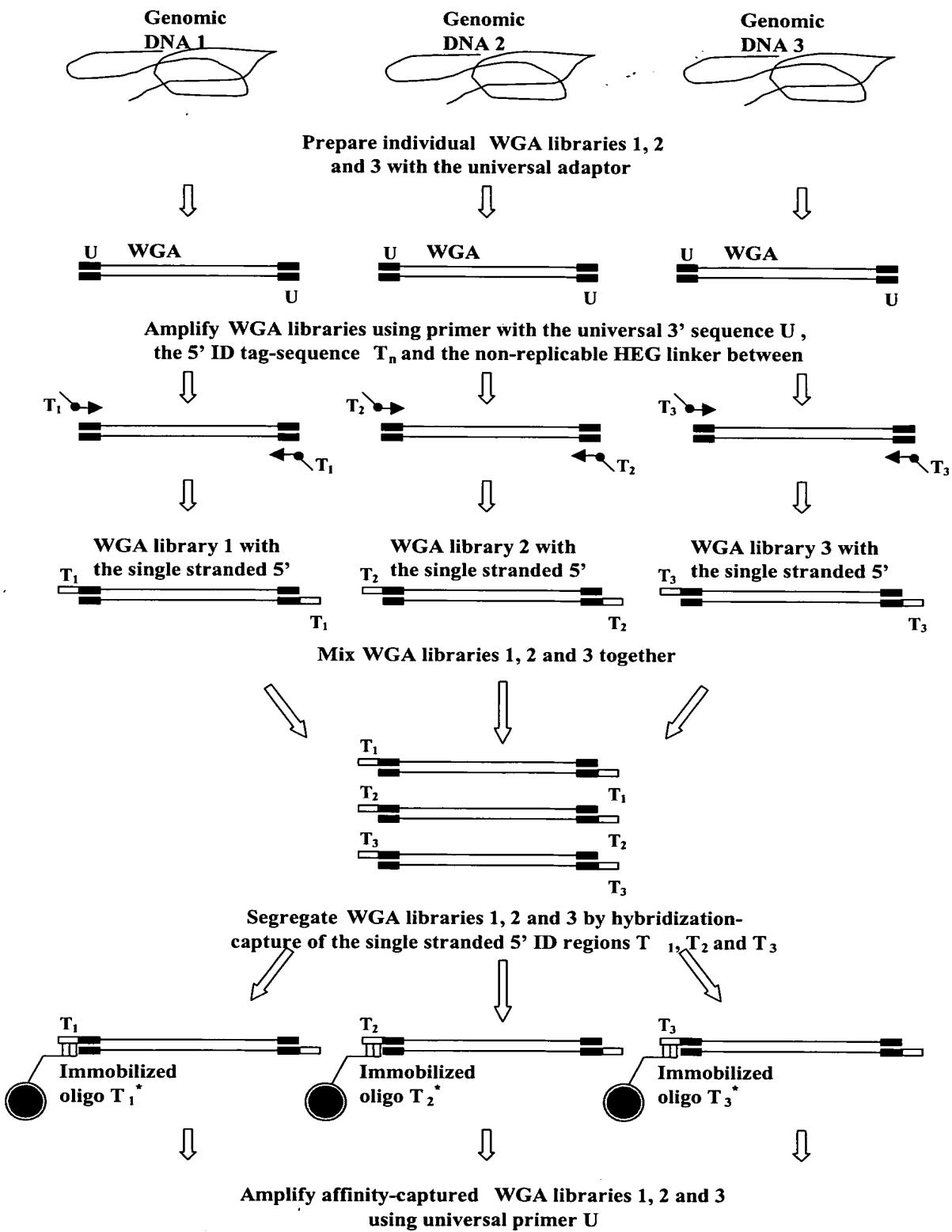


FIG. 18

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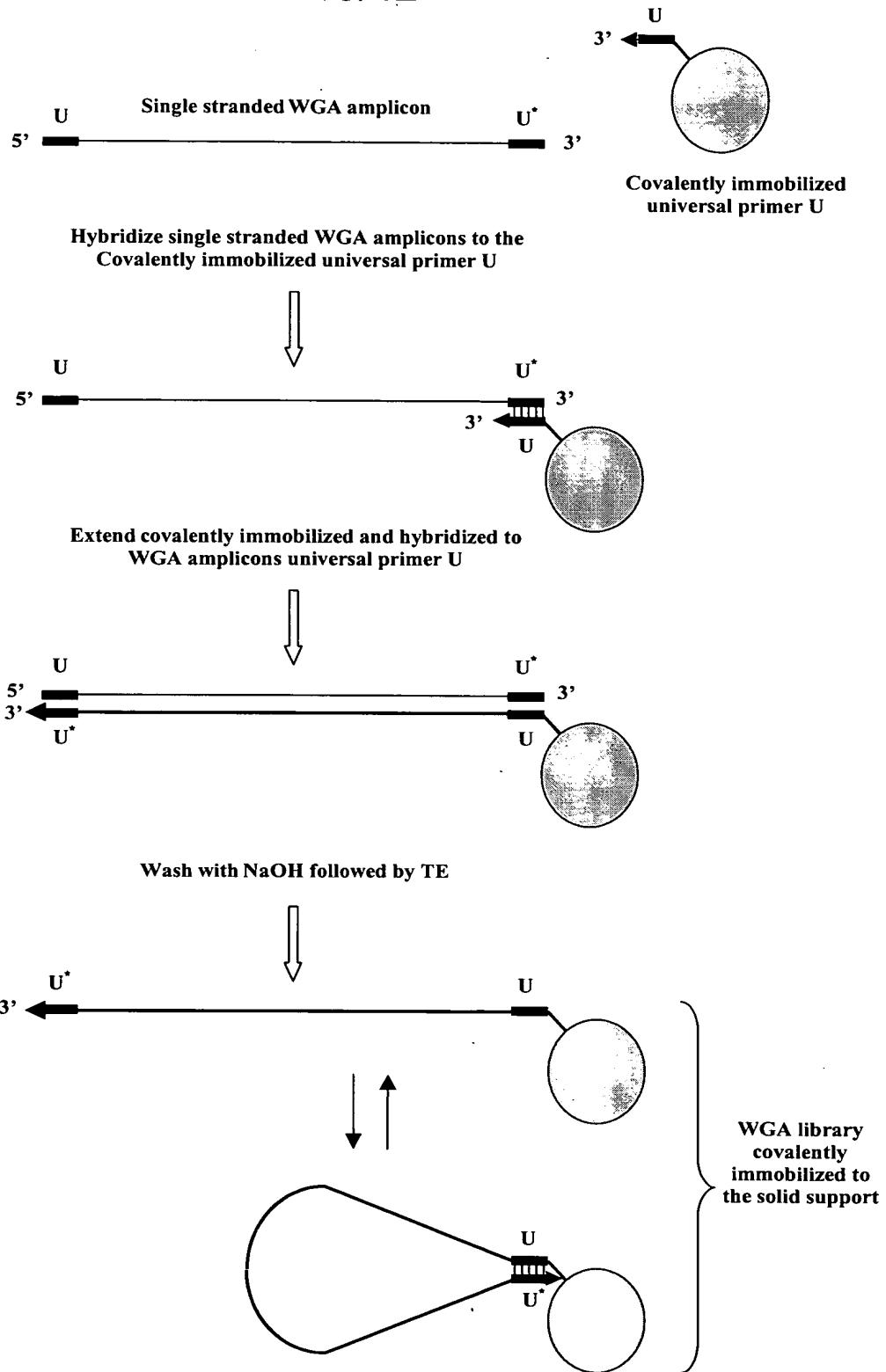
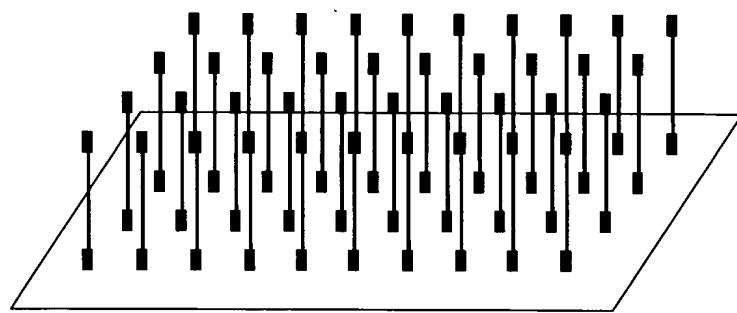


FIG. 19

A

**Covalent attachment of the individual
WGA libraries to a WGA micro-array
by replication**



B

**Non-covalent attachment of the individual WGA
libraries to a WGA micro-array by hybridization**

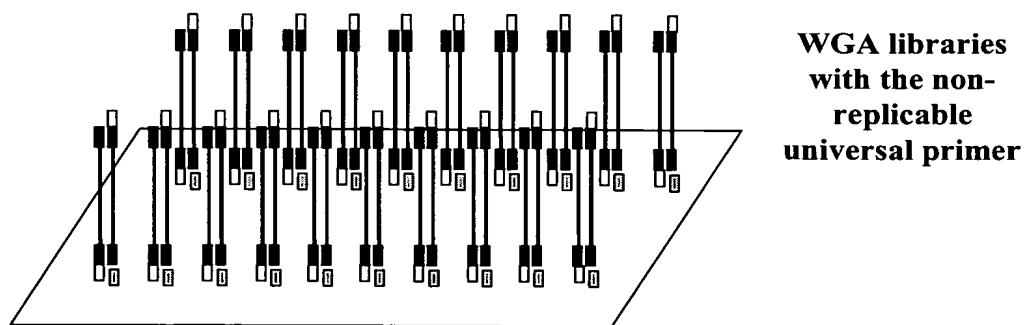


FIG. 20

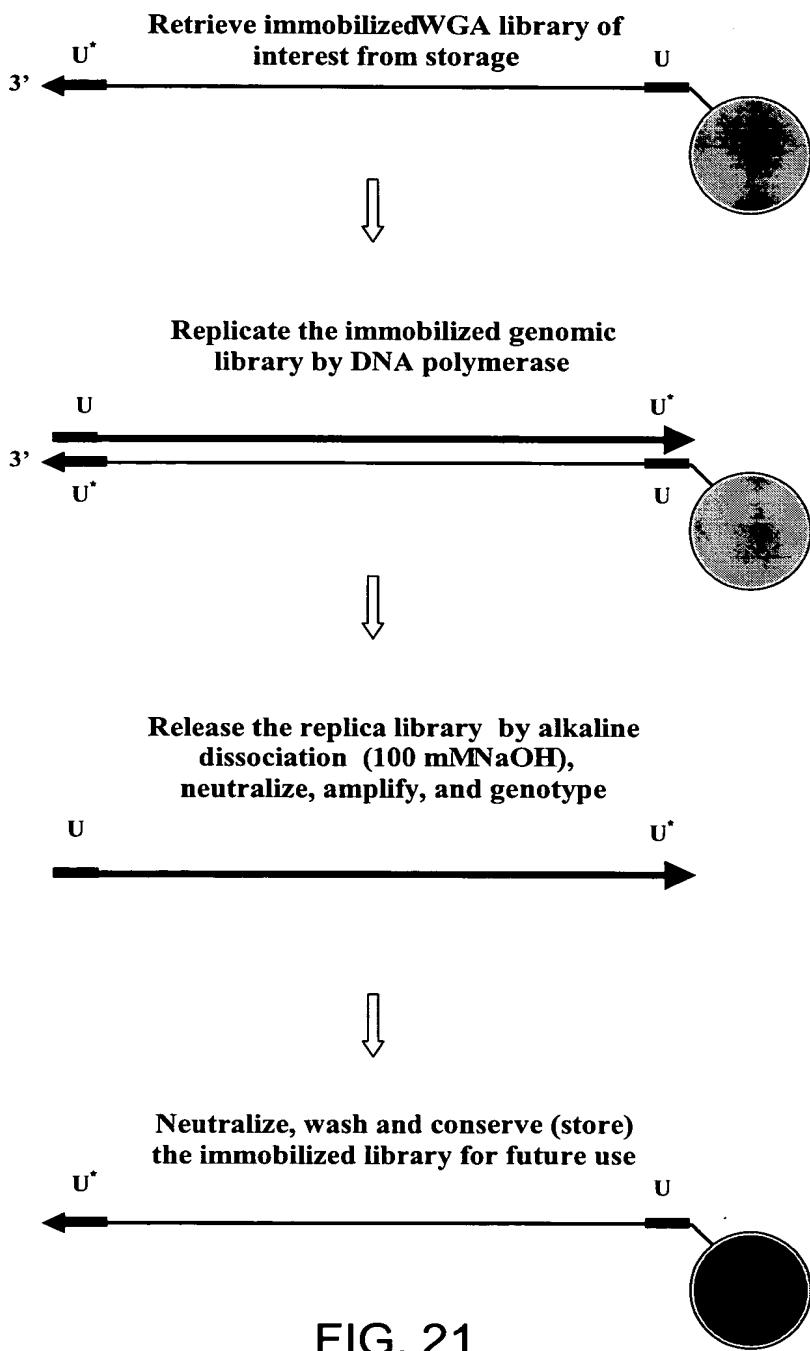


FIG. 21

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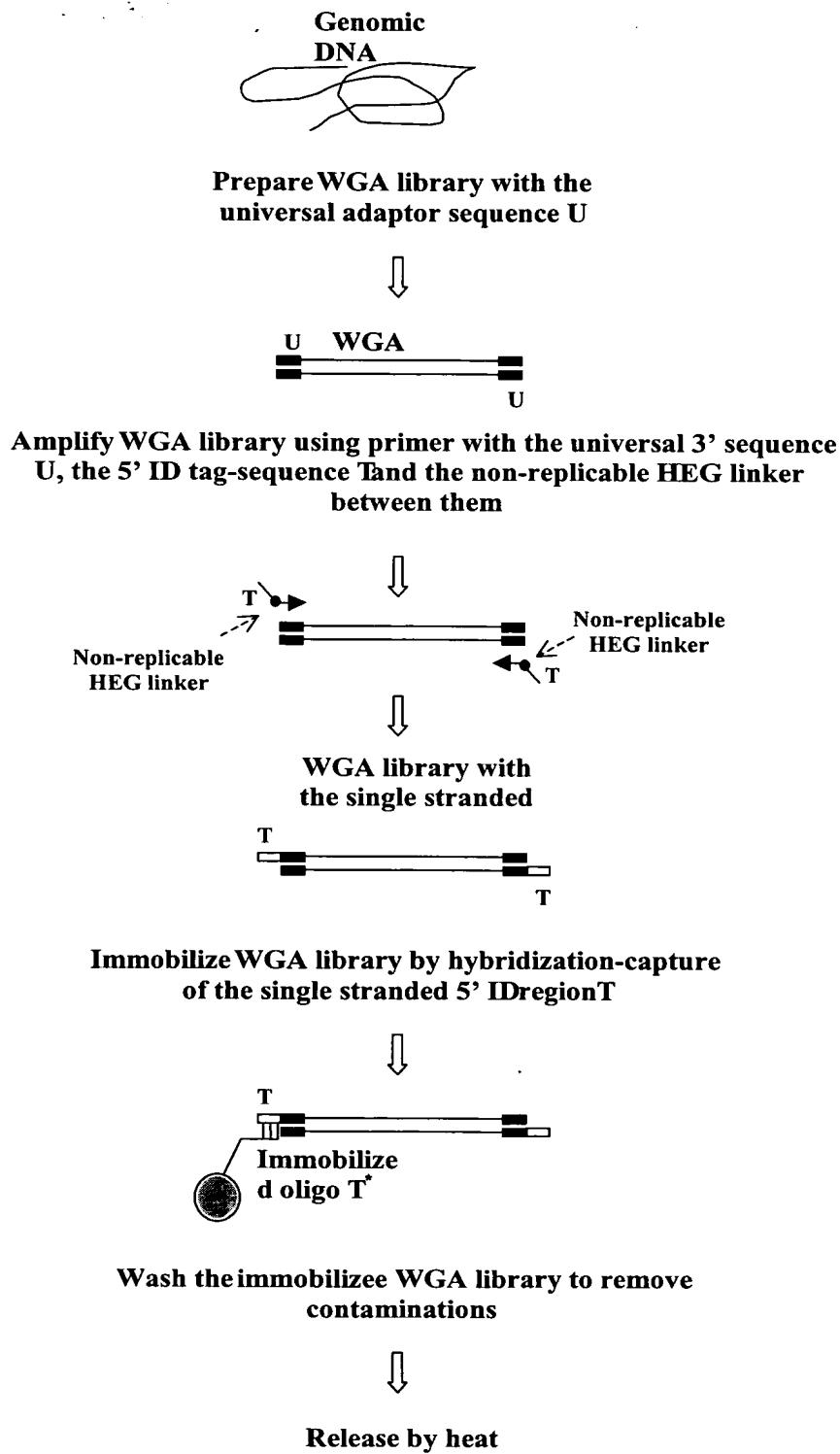
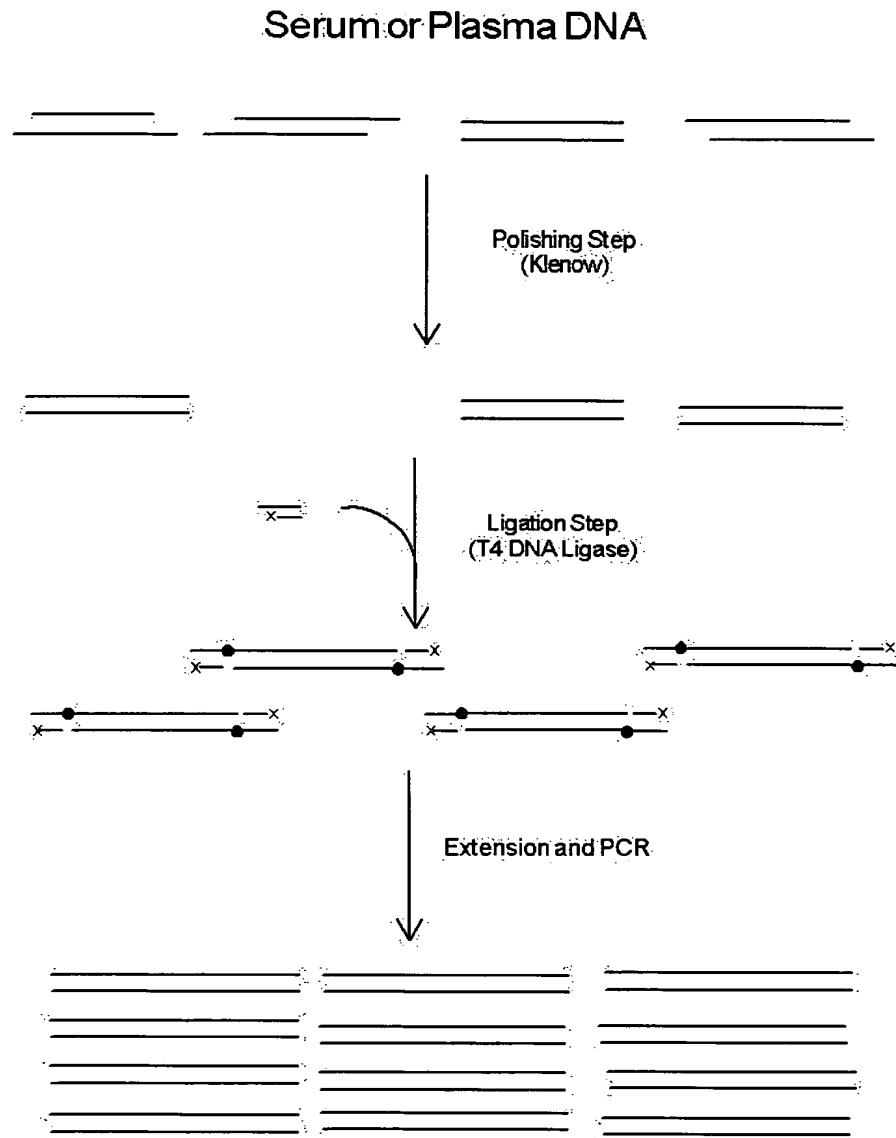


FIG. 22

A)



B)

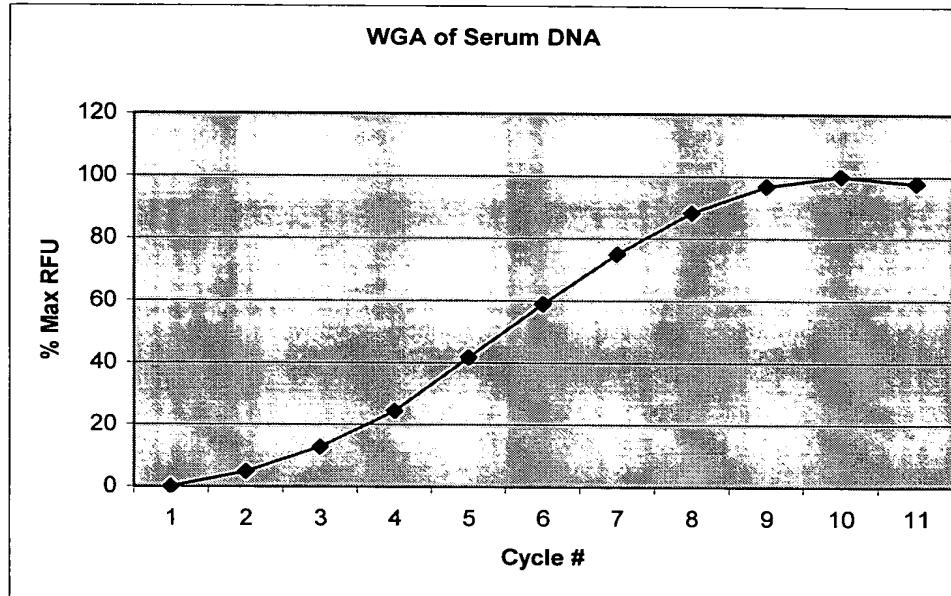
Yb8 Forward: 5'-CGAGGCGGGTGGATCATGAGGT-3' (SEQ ID NO:48)

Yb8 Reverse: 5'-TCTGTCGCCAGGCCGGACT-3' (SEQ ID NO:49)

FIG. 23

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A)



B)

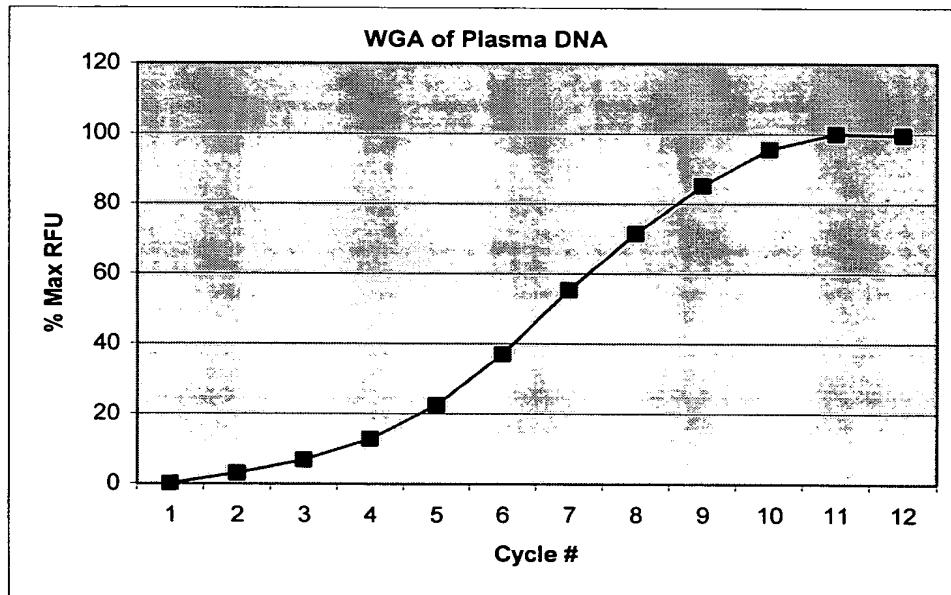
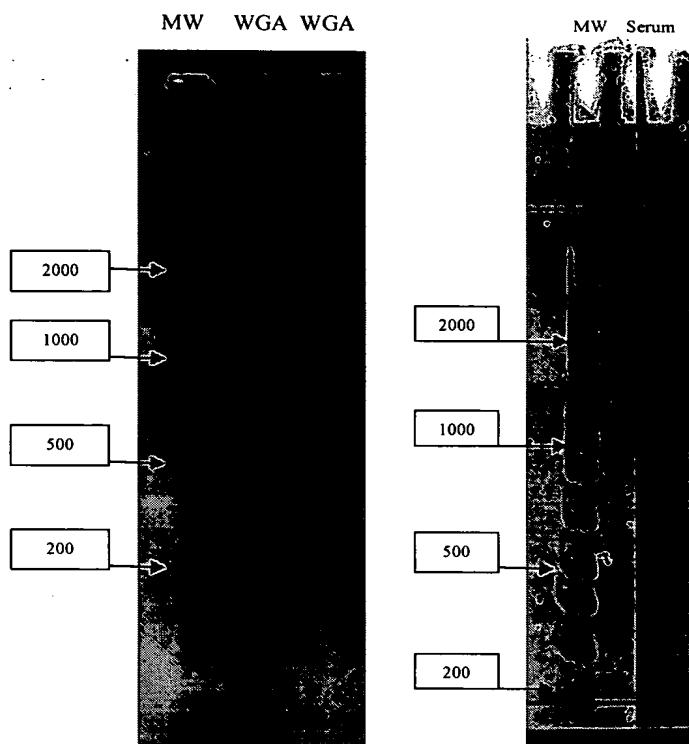


FIG. 24

A)



B)

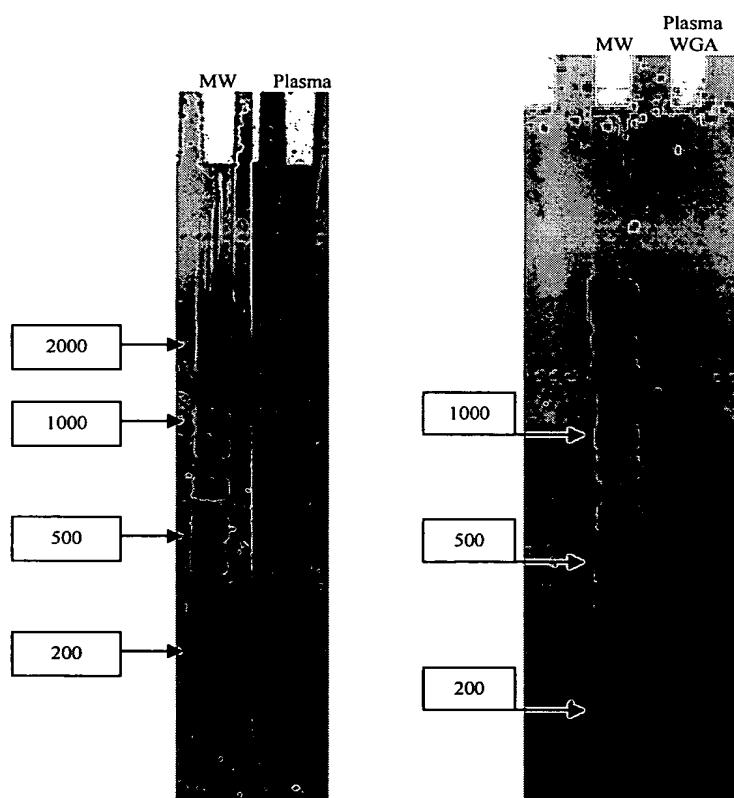


FIG. 25

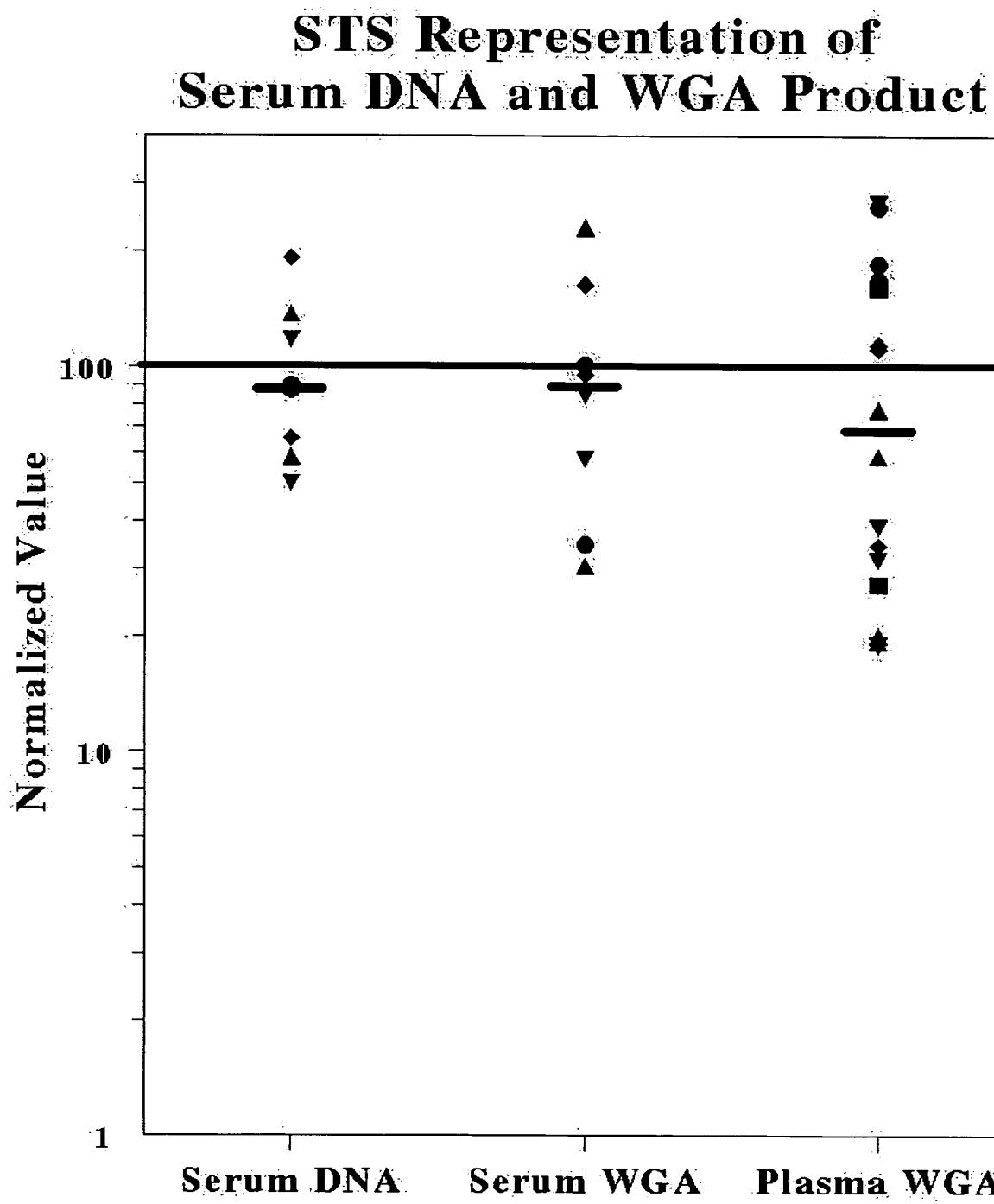


FIG. 26

Serum or Plasma DNA

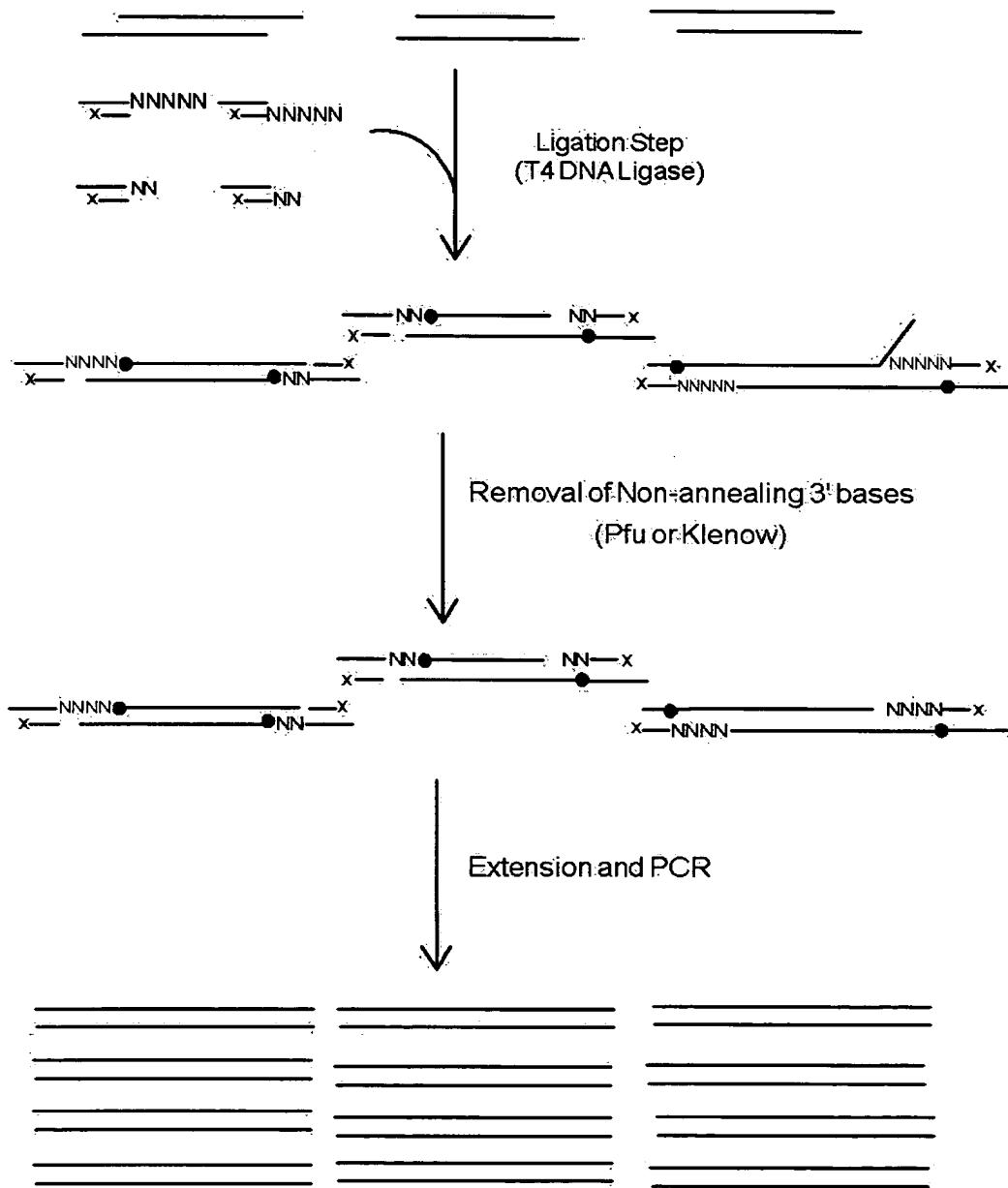


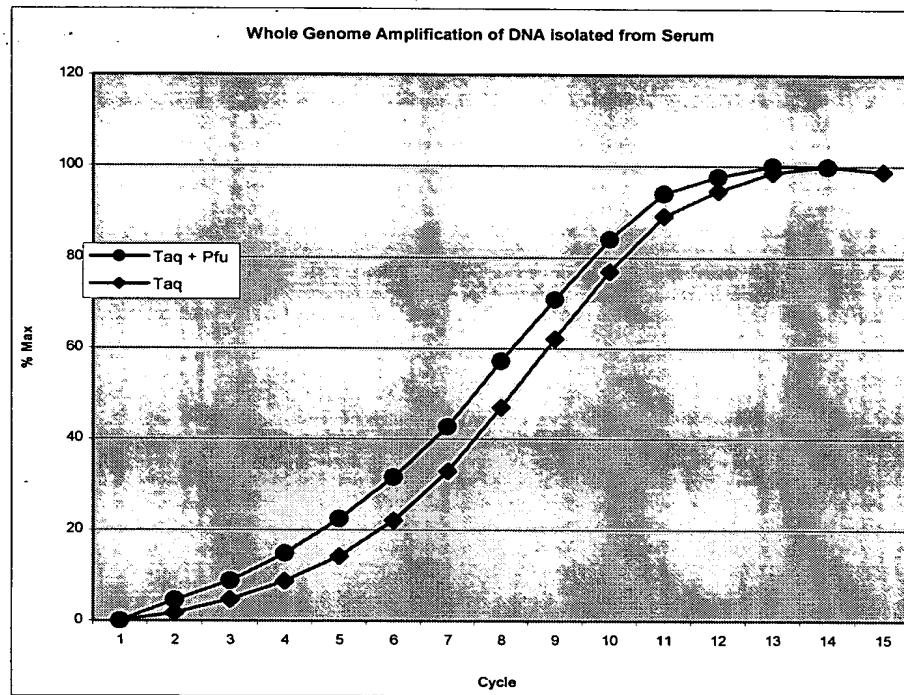
FIG. 27

Figure Y2

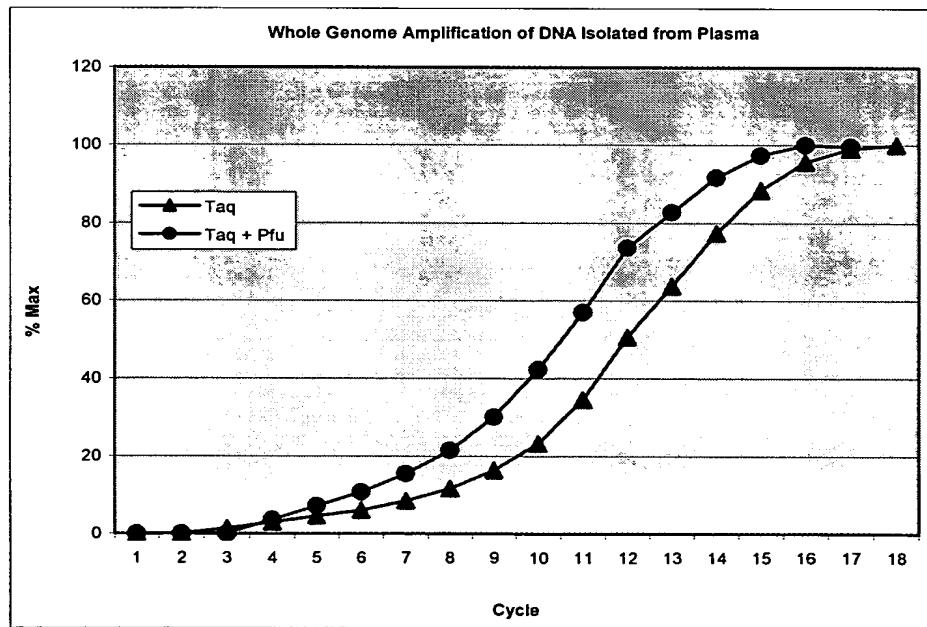
<u>5' T7N Overhang Adaptors</u>	<u>3' T7N Overhang Adaptors</u>
N2T7	T7N2
5'-GTAATACGACTCACTATAAGG-3' (SEQ ID NO:32) 3'-/3AmMC7/TGAGTGATATCCNN-5' (SEQ ID NO:12)	(SEQ ID NO:44) 5'-GTAATACGACTCACTATAAGGNN-3' 3'-/3AmMC7/TGAGTGATATCC-5' (SEQ ID NO:33)
N3T7	T7N3
5'-GTAATACGACTCACTATAAGG-3' (SEQ ID NO:32) 3'-/3AmMC7/TGAGTGATATCCNNN-5' (SEQ ID NO:13)	(SEQ ID NO:45) 5'-GTAATACGACTCACTATAAGGNNN-3' 3'-/3AmMC7/TGAGTGATATCC-5' (SEQ ID NO:33)
N4T7	T7N4
5'-GTAATACGACTCACTATAAGG-3' (SEQ ID NO:32) 3'-/3AmMC7/TGAGTGATATCCNNN-5' (SEQ ID NO:42)	(SEQ ID NO:46) 5'-GTAATACGACTCACTATAAGGNNNN-3' 3'-/3AmMC7/TGAGTGATATCC-5' (SEQ ID NO:33)
N5T7	T7N5
5'-GTAATACGACTCACTATAAGG-3' (SEQ ID NO:32) 3'-/3AmMC7/TGAGTGATATCCNNNN-5' (SEQ ID NO:43)	(SEQ ID NO:47) 5'-GTAATACGACTCACTATAAGGNNNNN-3' 3'-/3AmMC7/TGAGTGATATCC-5' (SEQ ID NO:33)

FIG. 28

A)



B)

**FIG. 29**

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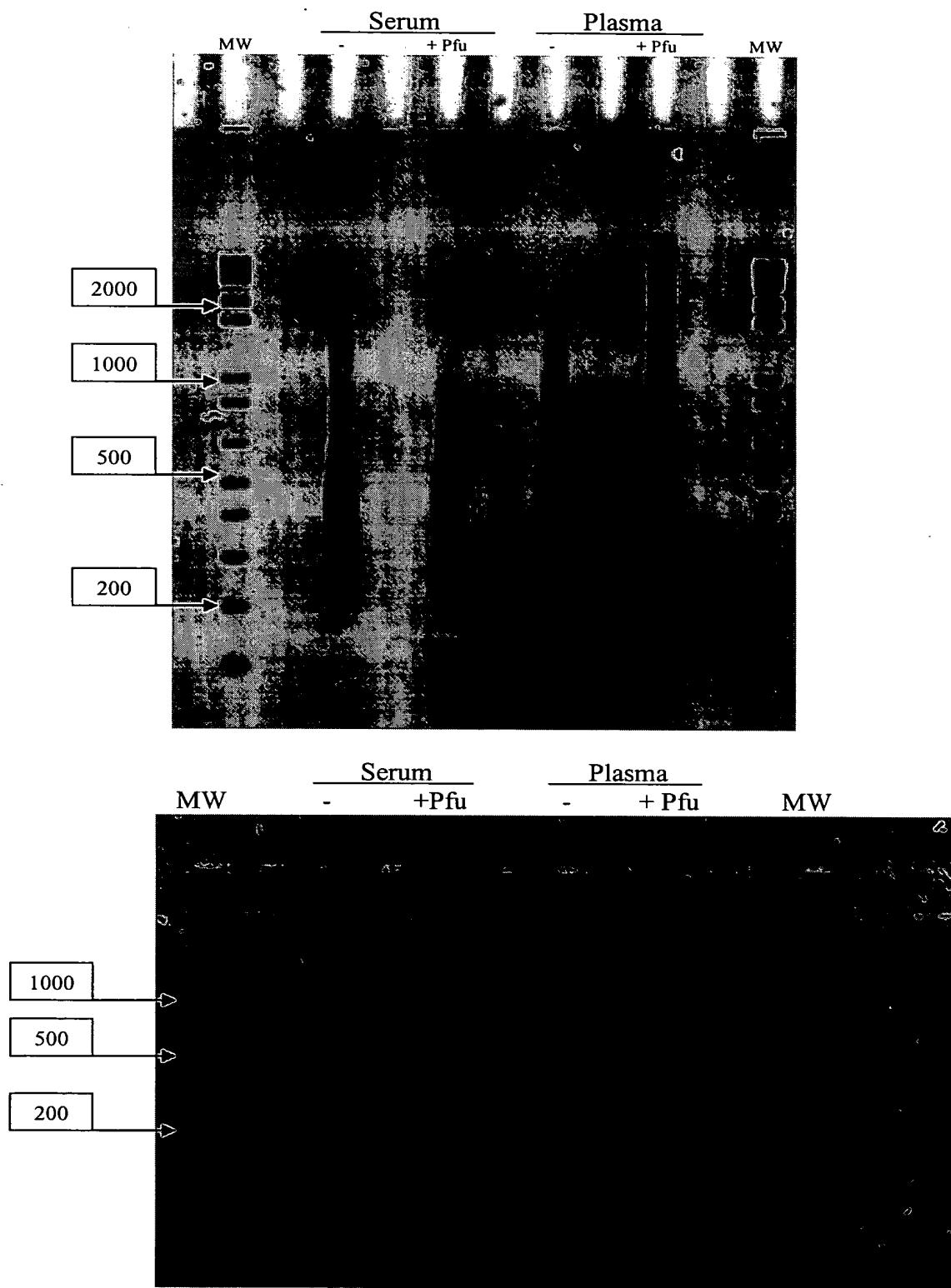


FIG. 30

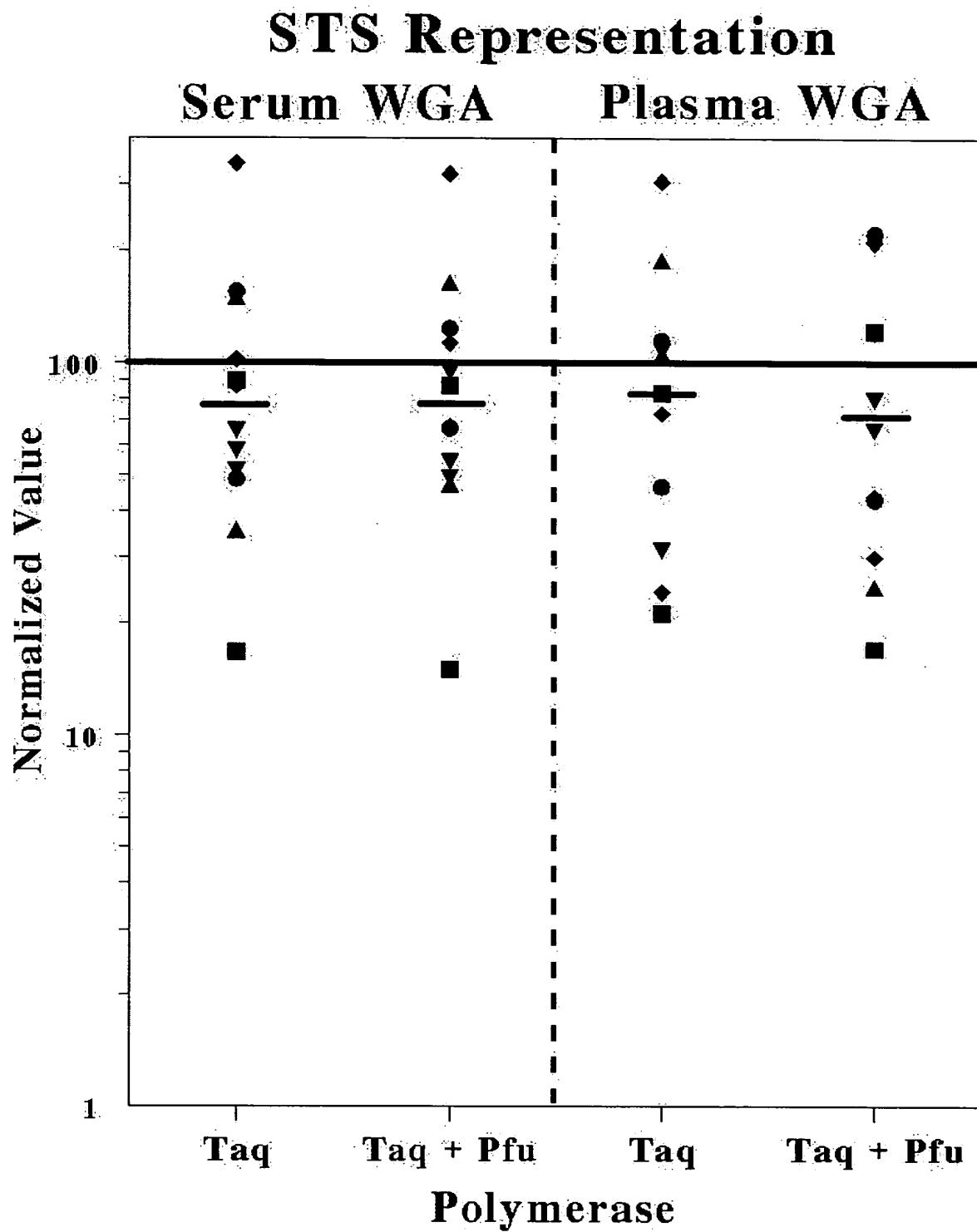


FIG. 31

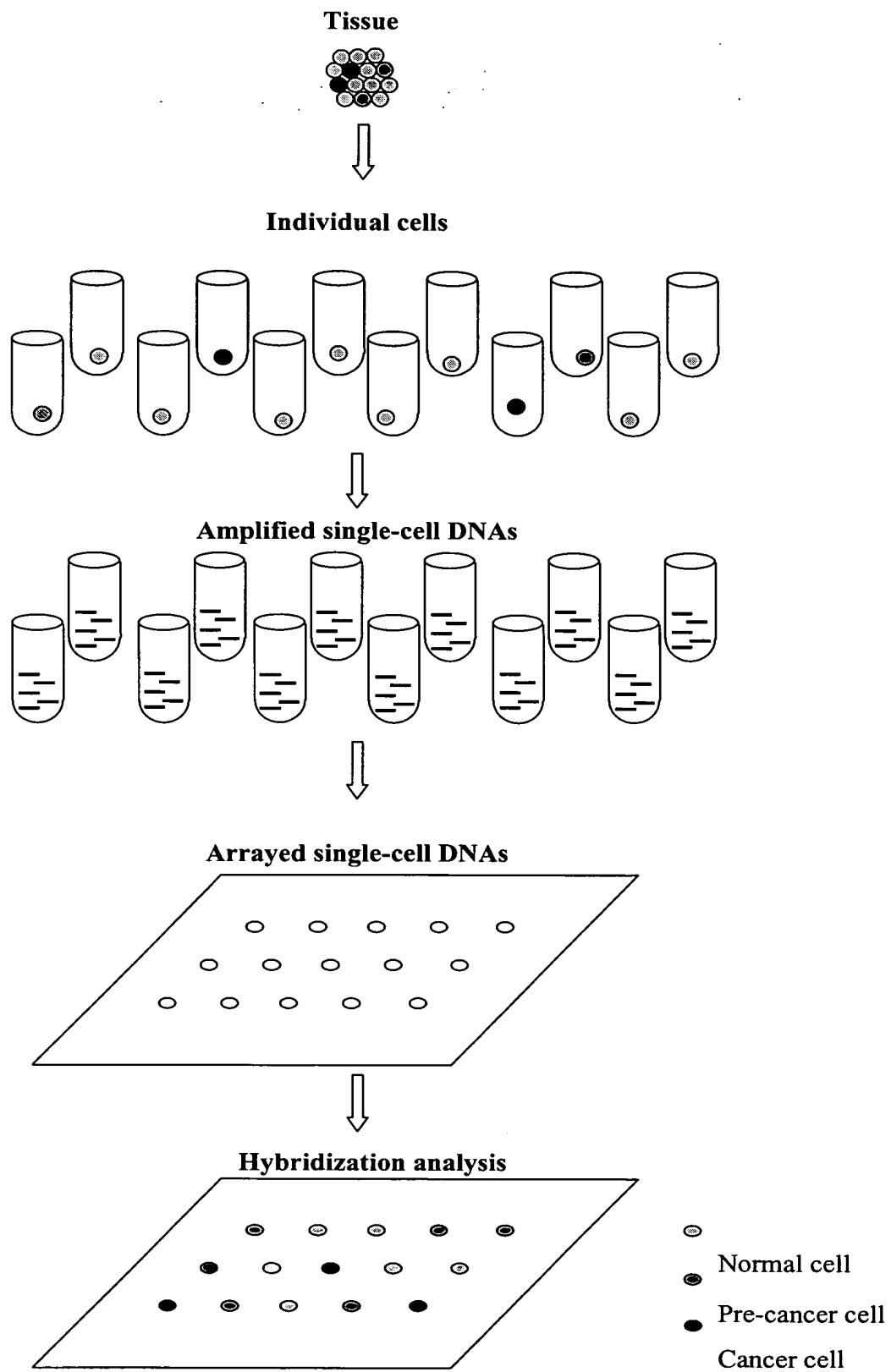


FIG. 32

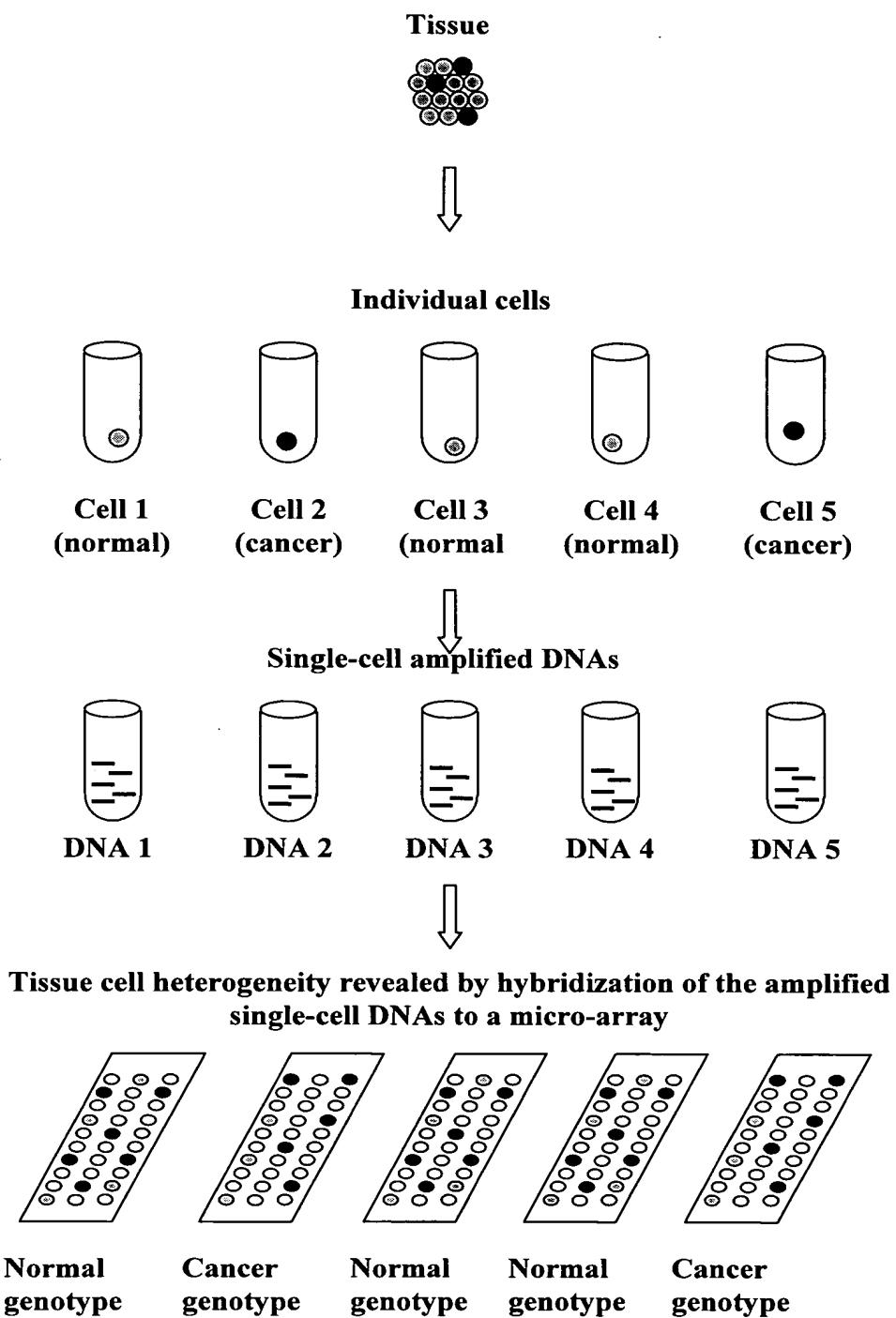


FIG. 33

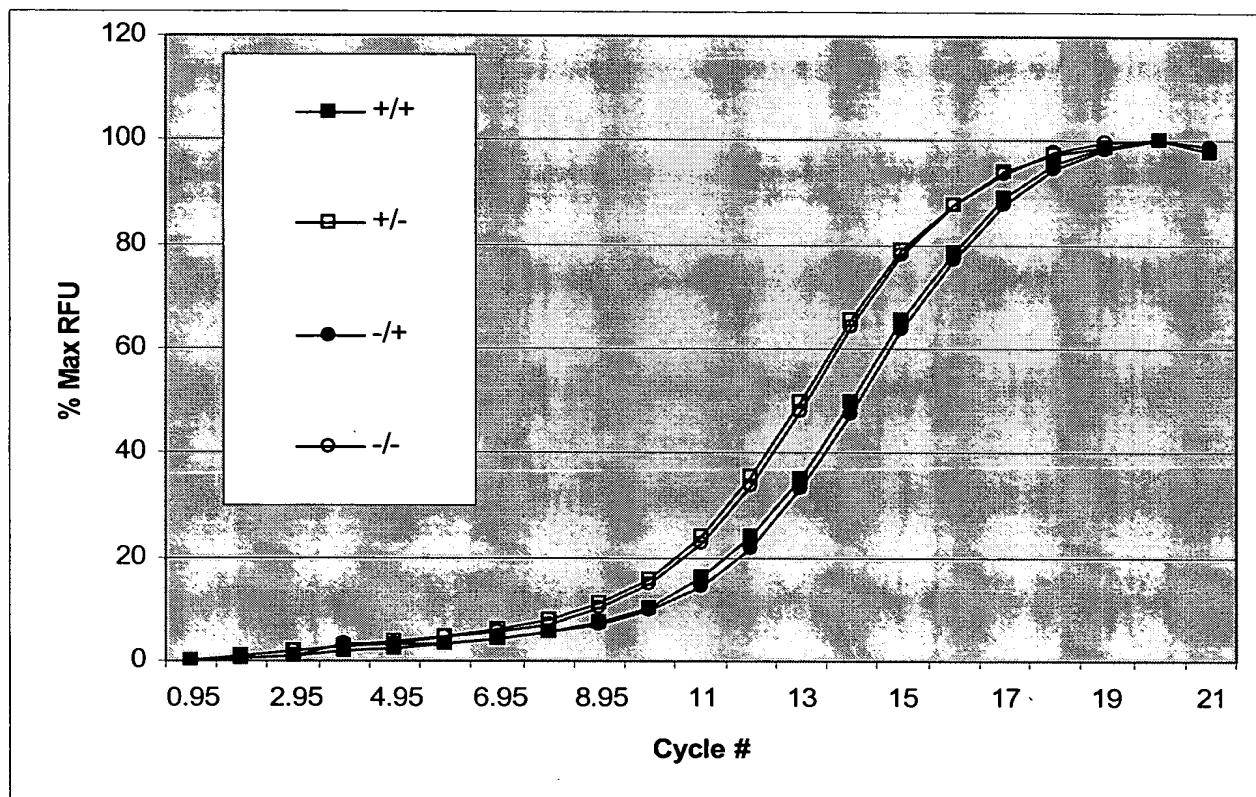


FIG. 34

Representation of STS Sites

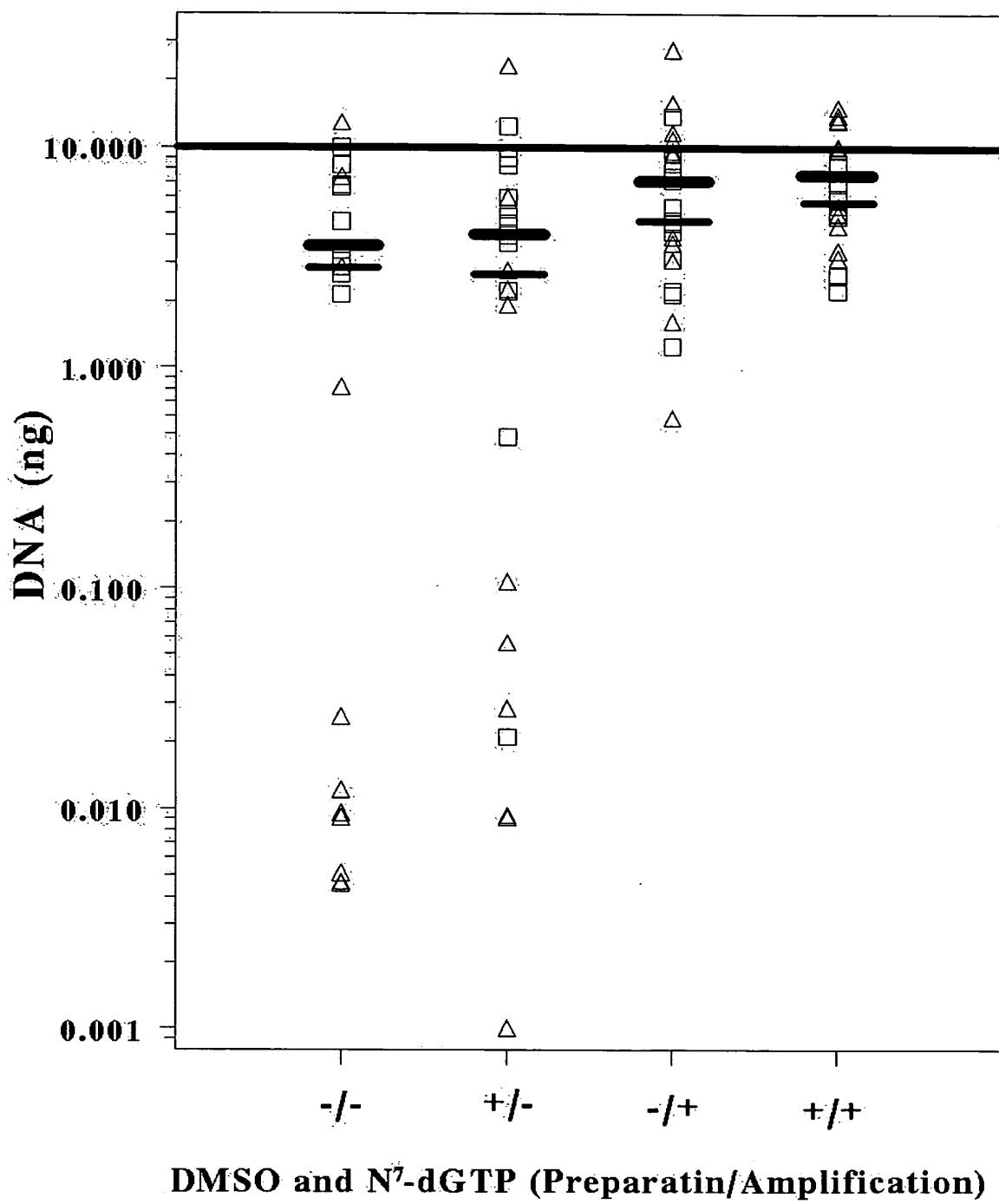
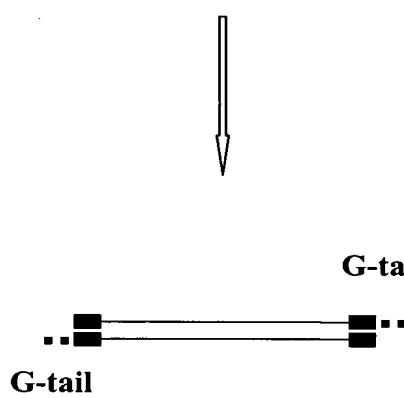


FIG. 35

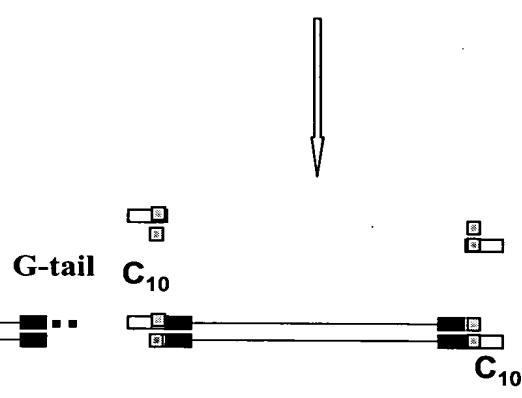
**Prepare and amplify WGA or
WTA library using universal
primer sequence U**



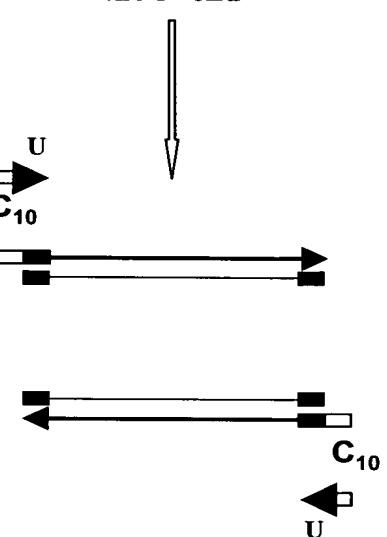
**A Add poly dG tail by
terminal
deoxynuclotidyl
transferase**



**B Ligate adaptor
containing C₁₀
sequence at the 5' end
of the long
oligonucleotide**



**C Replicate amplified
WGA library using
modified primer U
with C₁₀ sequence at
the 5' end**



**Targeted amplification of one or multiple DNA regions using universal primer C₁₀
and one or multiple specific primers P**

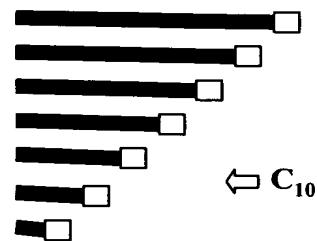
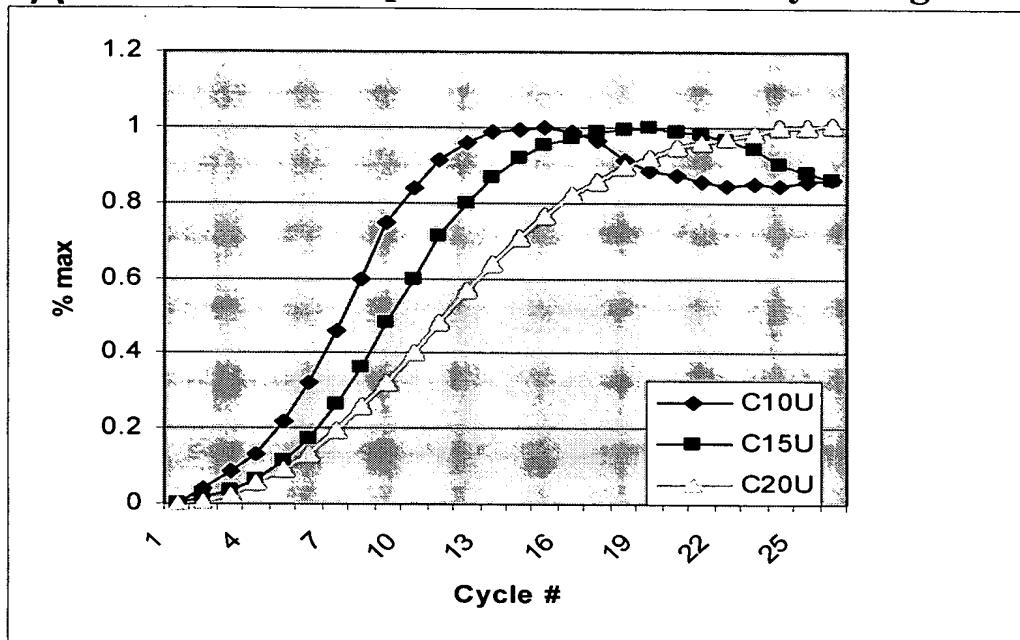


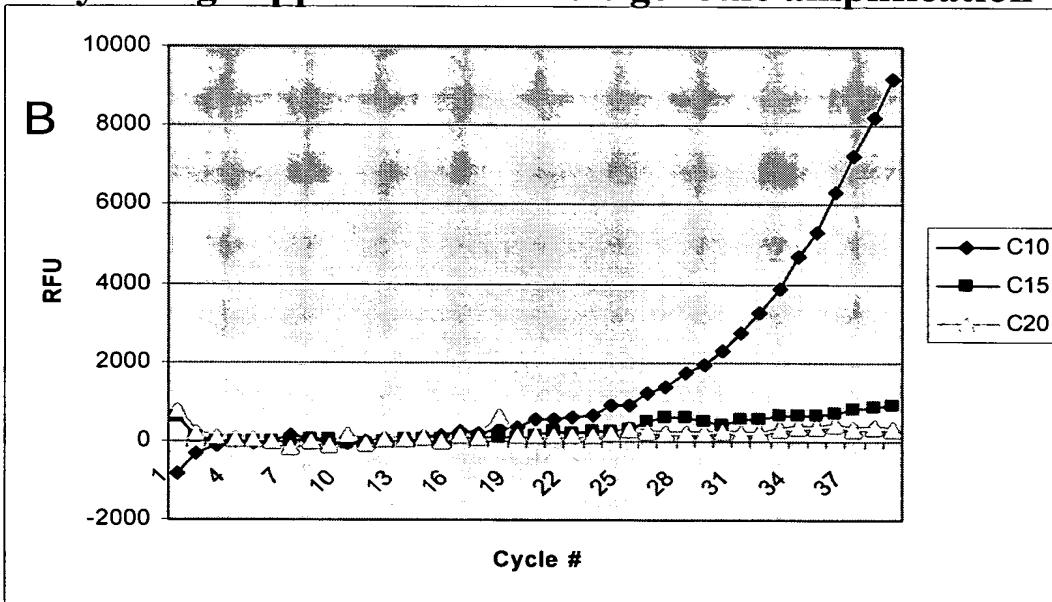
FIG.36

A WGA Incorporation terminal Poly-C-tags



5'-CCCCCCCCCCGTAATACGACTCACTATA-3' (SEQ ID NO:50)
 5'-CCCCCCCCCCGTAATACGACTCACTATA-3' (SEQ ID NO:51)
 5'-CCCCCCCCCCGTAATACGACTCACTATA-3' (SEQ ID NO:52)

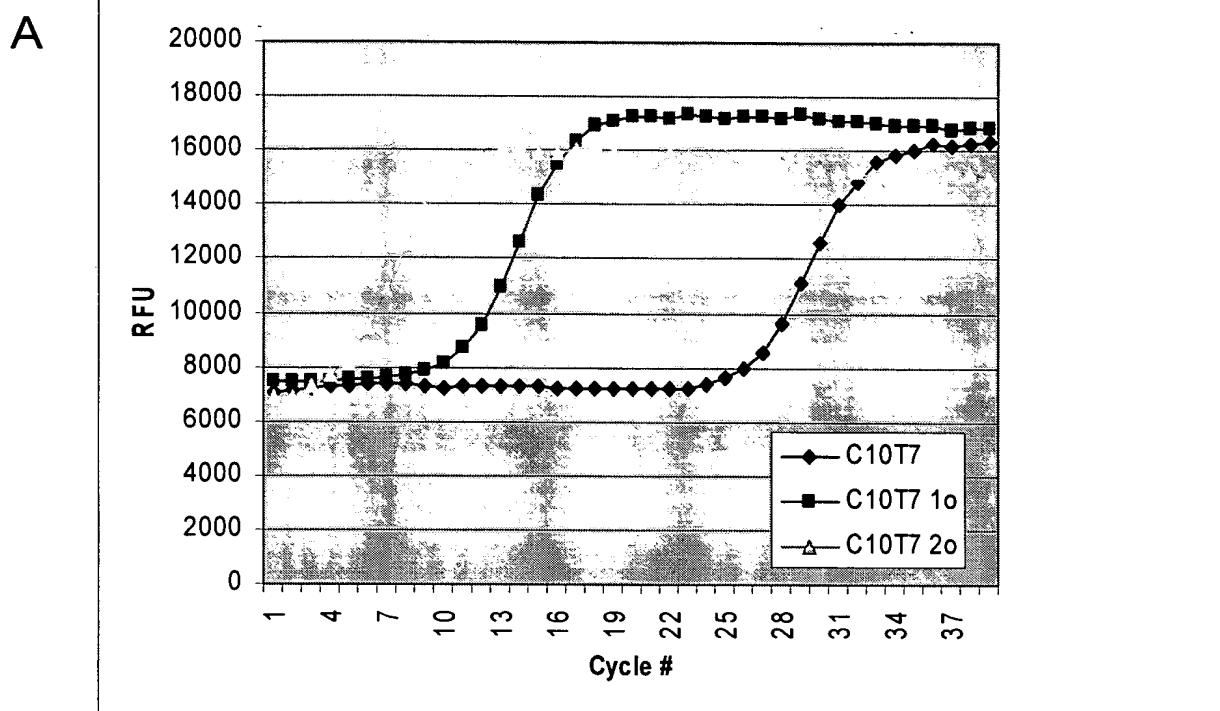
Poly-C-tag suppression of whole genome amplification



5'-CCCCCCCCCC-3' (SEQ ID NO:53)
 5'-CCCCCCCCCCGTAATACGACTCACTATA-3' (SEQ ID NO:54)
 5'-CCCCCCCCCCGTAATACGACTCACTATA-3' (SEQ ID NO:55)

FIG.37

Targeted amplification from poly-C₁₀ WGA Libraries



TGA Specific Primer Titration

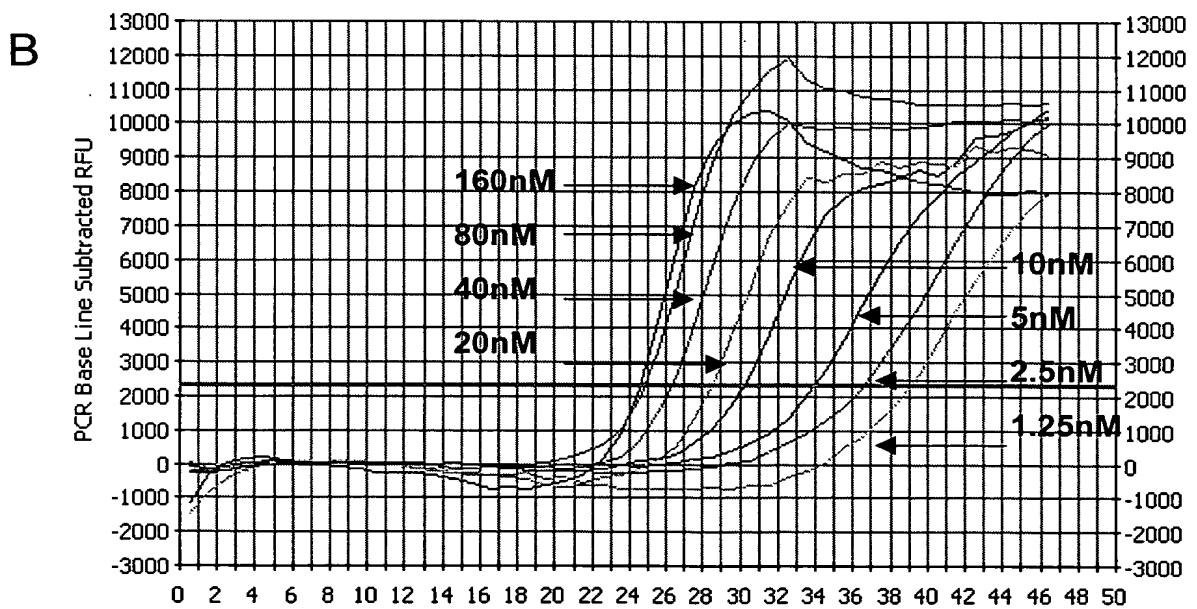
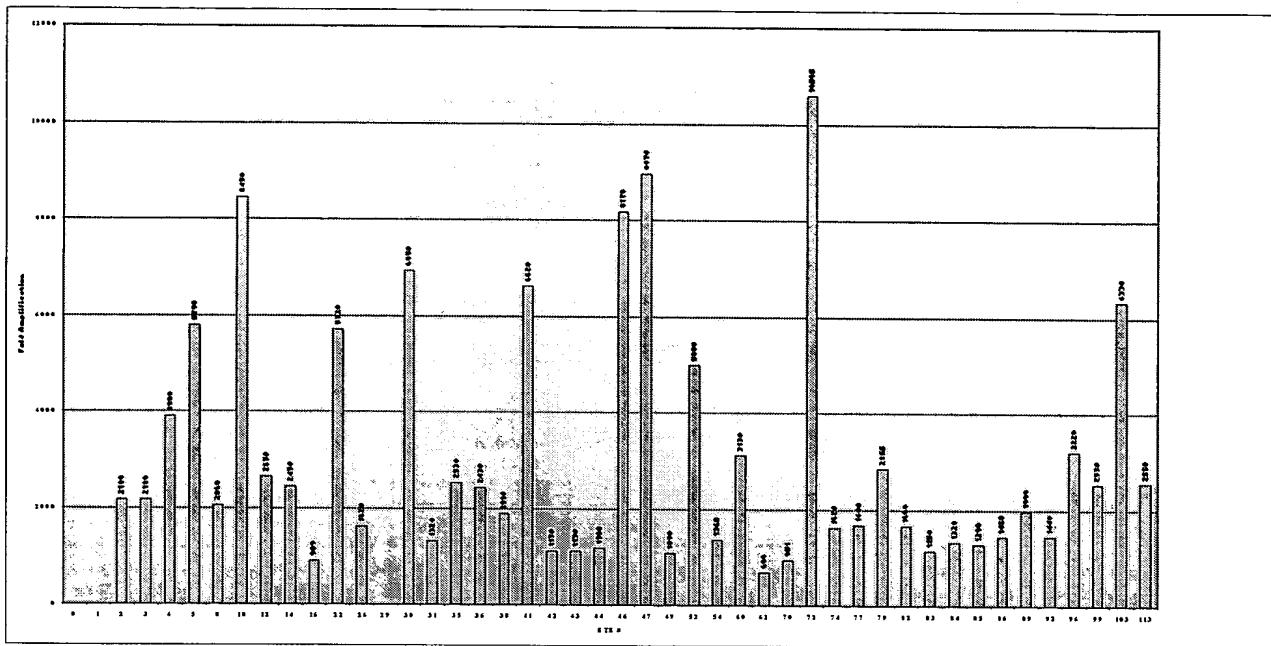


FIG. 38

A

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B

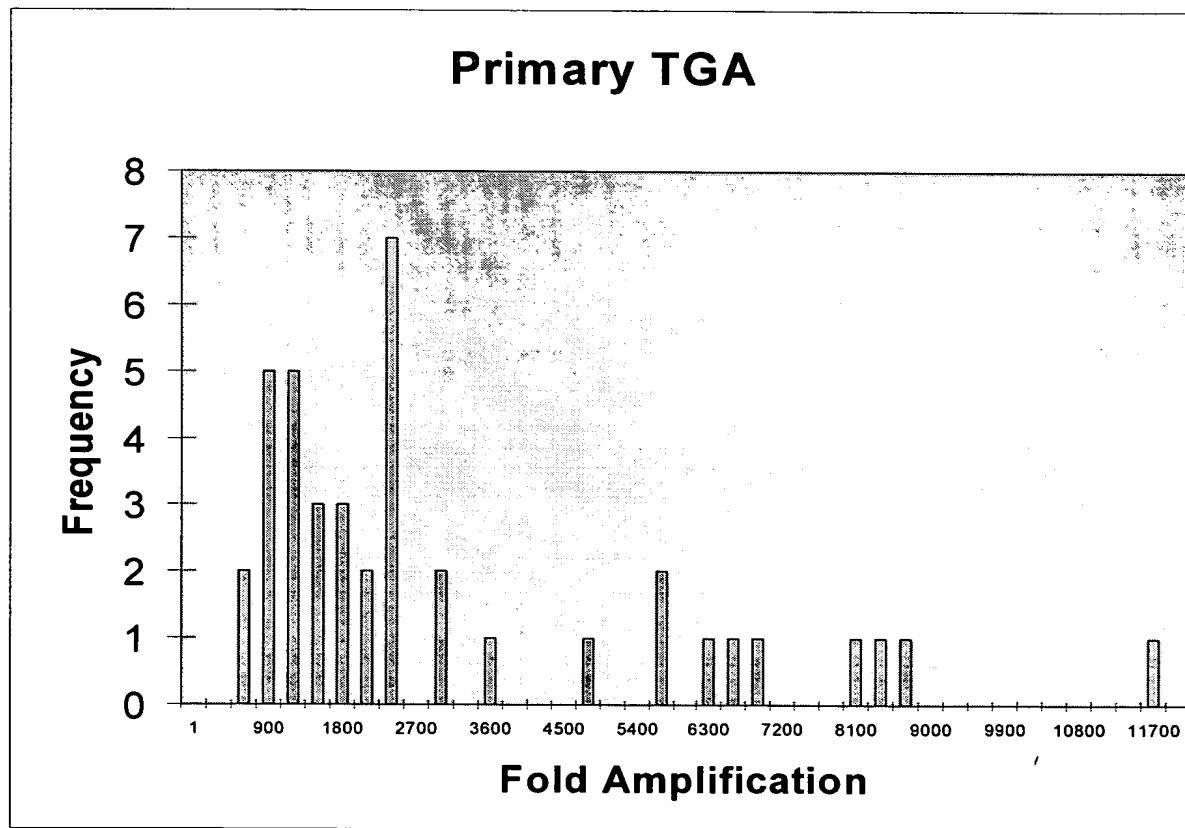


FIG. 39

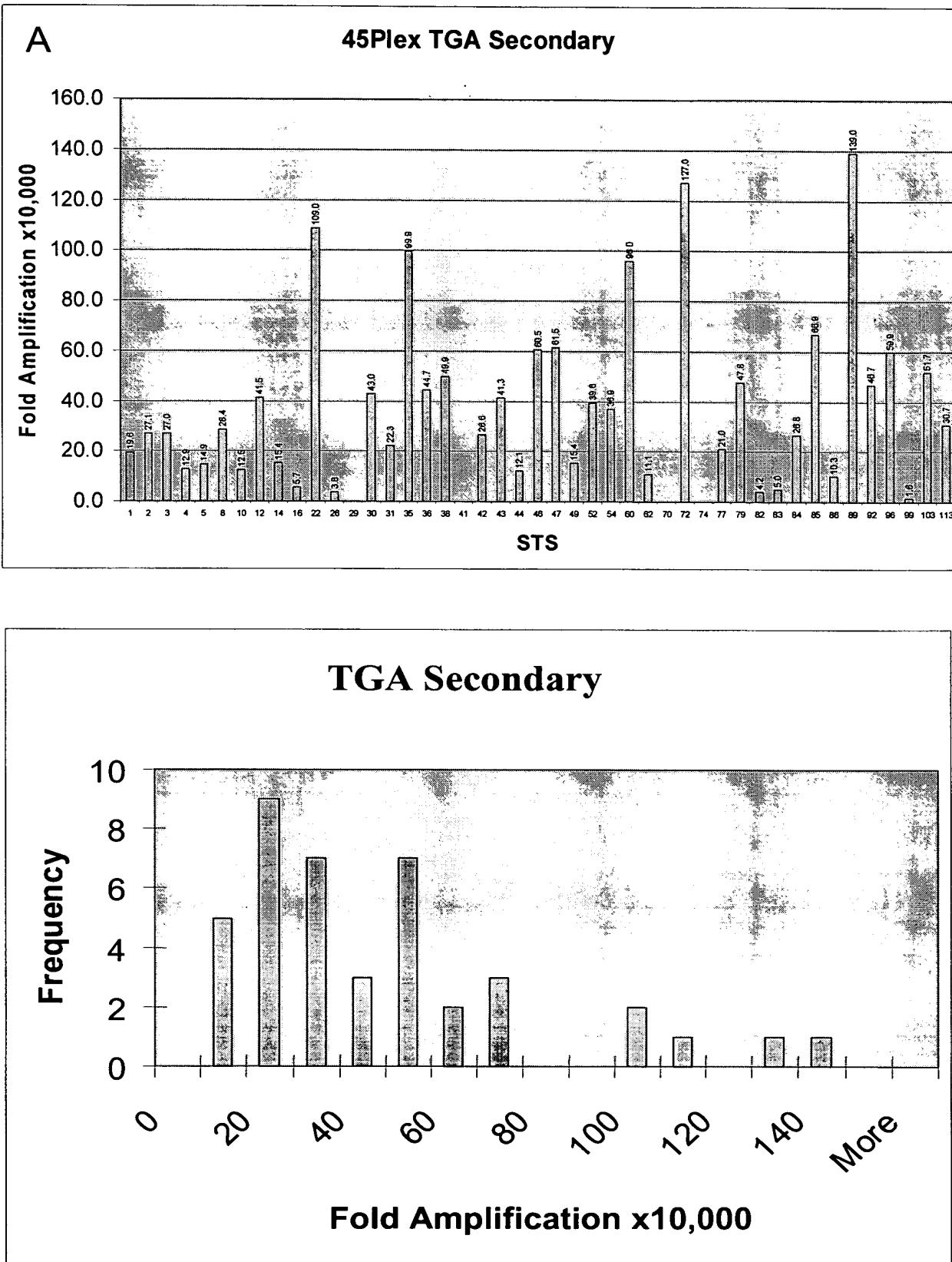


FIG. 40

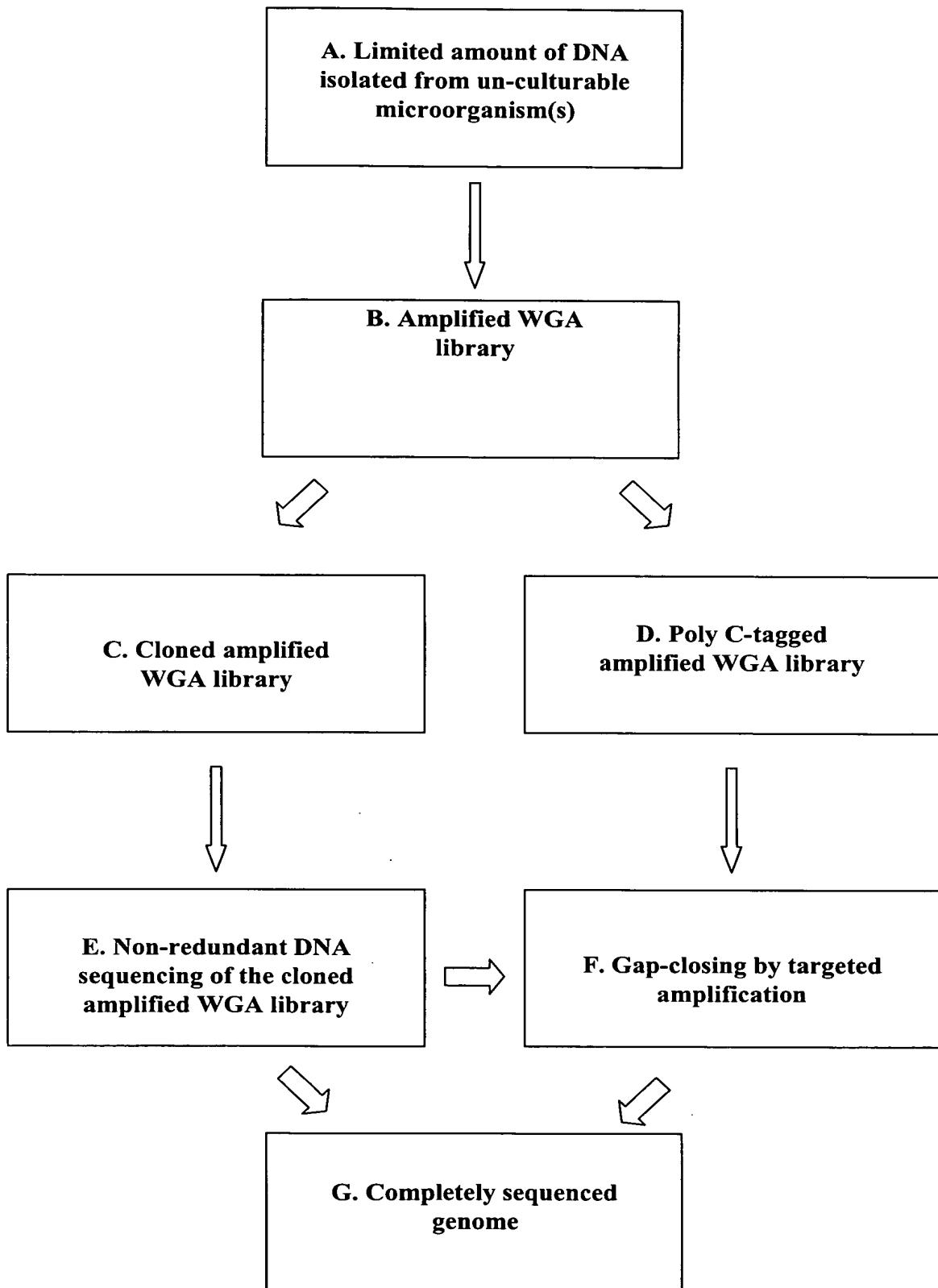


FIG. 41

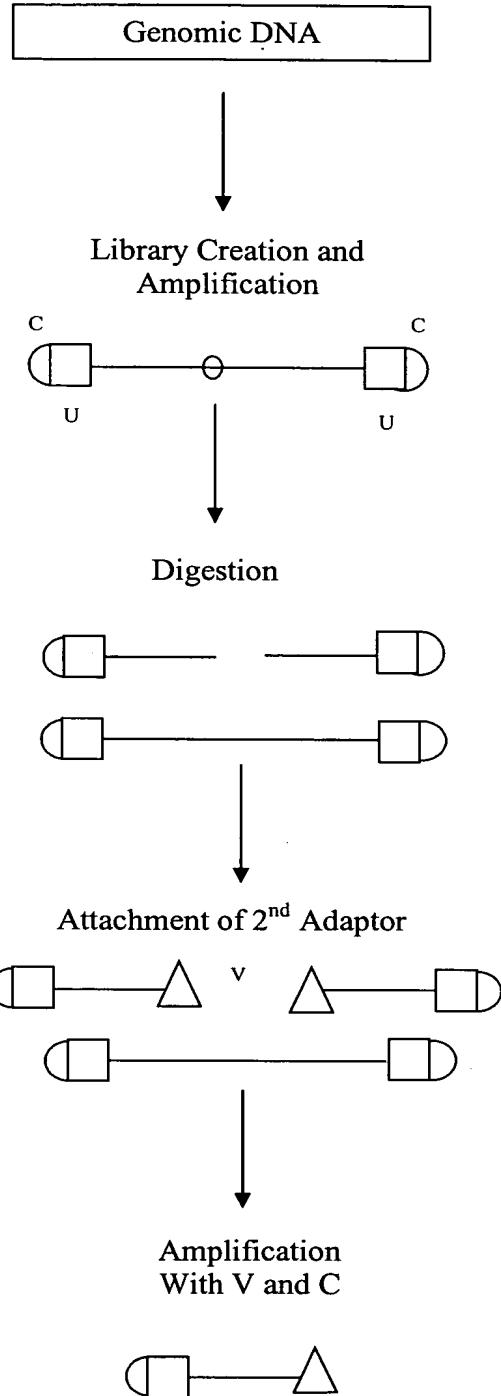


FIG. 42